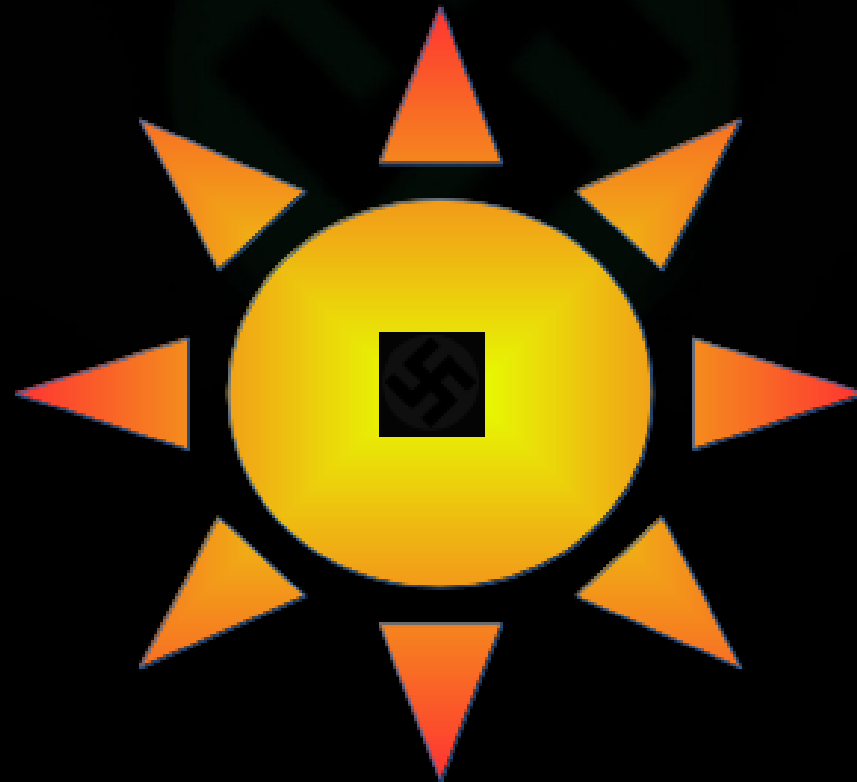


ANAND'S ATLAS OF PATHOLOGY

WEB VERSION 1.0



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4. To my family, friends, teachers and well wishers for their blessings, constant encouragement and support
5. To all my students – Past, Present and Future
6. To **Abhinandan** for laying the ground work of this Atlas
7. **Professor. Dr.P.M.Subramaniam** without whose immense help this atlas would not have seen the light of the day

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SHOULD BE REFERRED FOR ADDITIONAL
POINTS

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SECTION - 1

HISTOPATHOLOGY SLIDES

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LIST OF COLOUR PLATES

MALIGNANT MELANOMA
SQUAMOUS CELL CARCINOMA
BASAL CELL CARCINOMA
PLEOMORPHIC ADENOMA
CIRRHOSIS OF LIVER
LOBAR PNEUMONIA
SEMINOMA TESTIS
OSTEOCLASTOMA

LIST OF COLOUR PLATES

RENAL CELL CARCINOMA

CHRONIC PYELONEPHRITIS

VESICULAR MOLE

PAPILLARY CARCINOMA OF THYROID

ADENOCARCINOMA OF STOMACH

PROLIFERATIVE ENDOMETRIUM

SECRETORY ENDOMETRIUM

BENIGN PROSTATIC HYPERPLASIA

LIST OF COLOUR PLATES

COLLOID GOITRE

LEIOMYOMA OF UTERUS

ACUTE APPENDICITIS

TUBERCULOUS LYMPHADENITIS

RHINOSPOROIDOSIS

MADURA MYCOSIS

ACTINOMYCOSIS

FIBROADENOMA OF BREAST (MIXED)

MALIGNANT MELANOMA

**USUALLY PRESENTS AS A
ULCEROPROLIFERATIVE
PIGMENTED LESION IN THE EXTREMITIES
AROUND THE 5TH DECADE
IN A VERY SHORT DURATION
(LESS THAN A MONTH)**

A microscopic image of tissue showing brown pigmentation. The background is a light pinkish-purple, and there are numerous dark brown, irregularly shaped pigments scattered throughout. A blue arrow points from the word 'PIGMENTATION' to one of these dark brown areas.

PIGMENTATION



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MALIGNANT MELANOMA

COMMON NEOPLASM AFFECTING THE SKIN

OTHER SITES - ORAL AND ANOGENITAL MUCOSA, OESOPHAGUS, MENINGES AND EYE

AETIOPATHOLOGY - EXPOSURE TO SUNLIGHT AND PRESENCE OF PRE EXISTING DYSPLASTIC NEVUS

CHANGE IN COLOR AND SIZE OF A PIGMENTED LESION IS A VERY IMPORTANT CLINICAL SIGN

MALIGNANT MELANOMA

ENLARGEMENT IN SIZE OF MOLE

DEVELOPMENT OF NEW PIGMENTED LESION IN ADULT LIFE

MELANOMA INITIALLY GROWS HORIZONTALLY WITHIN EPIDERMAL AND SUPERFICIAL DERMAL LAYERS

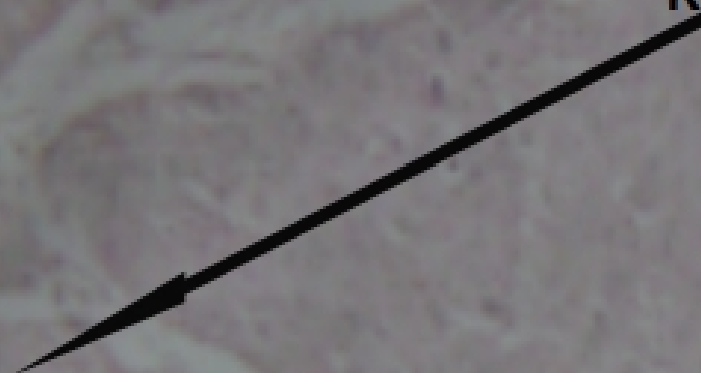
LATER IT TENDS GROW VERTICALLY INVADING DEEP

METASTASIS TO OTHER SITES LIKE LYMPH NODES, LIVER, LUNGS AND BRAIN IS BY HAEMATOGENOUS SPREAD

SQUAMOUS CELL CARCINOMA

**ULCERO PROLIFERATIVE LESION
USUALLY OCCURS IN THE EXTREMITIES
CHARACTERIZED BY CAULIFLOWER
LIKE GROWTH**

KERATIN PEARLS



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SQUAMOUS CELL CARCINOMA

**SQUAMOUS CELL CARCINOMA DENOTES A
CANCER IN WHICH THE TUMOUR CELLS
RESEMBLE STRATIFIED SQUAMOUS
EPITHELIUM**

**MOST COMMONEST TUMOUR ARISING ON SUN
EXPOSED SITES IN OLDER PEOPLE**

**PREDISPOSING FACTORS - SUNLIGHT,
IONISING RADIATION AND OLD BURN SCARS**

**OTHER SITES - CERVIX, OESOPHAGUS, ORAL
CAVITY, PENIS, VAGINA AND URINARY
BLADDER**

SQUAMOUS CELL CARCINOMA

PRESENCE OF HIGHLY ATYPICAL CELLS IN EPIDERMIS

**USUALLY POLYGONAL SQUAMOUS CELLS
ARRANGED IN ORDERLY LOBULES WITH LARGE
ZONES OF KERATINISATION**

METASTASIS OCCURS TO REGIONAL LYMPH NODES

**INDIVIDUALS WITH IMMUNOSUPPRESSION ARE
LIKELY TO DEVELOP SQUAMOUS CELL
CARCINOMAS**

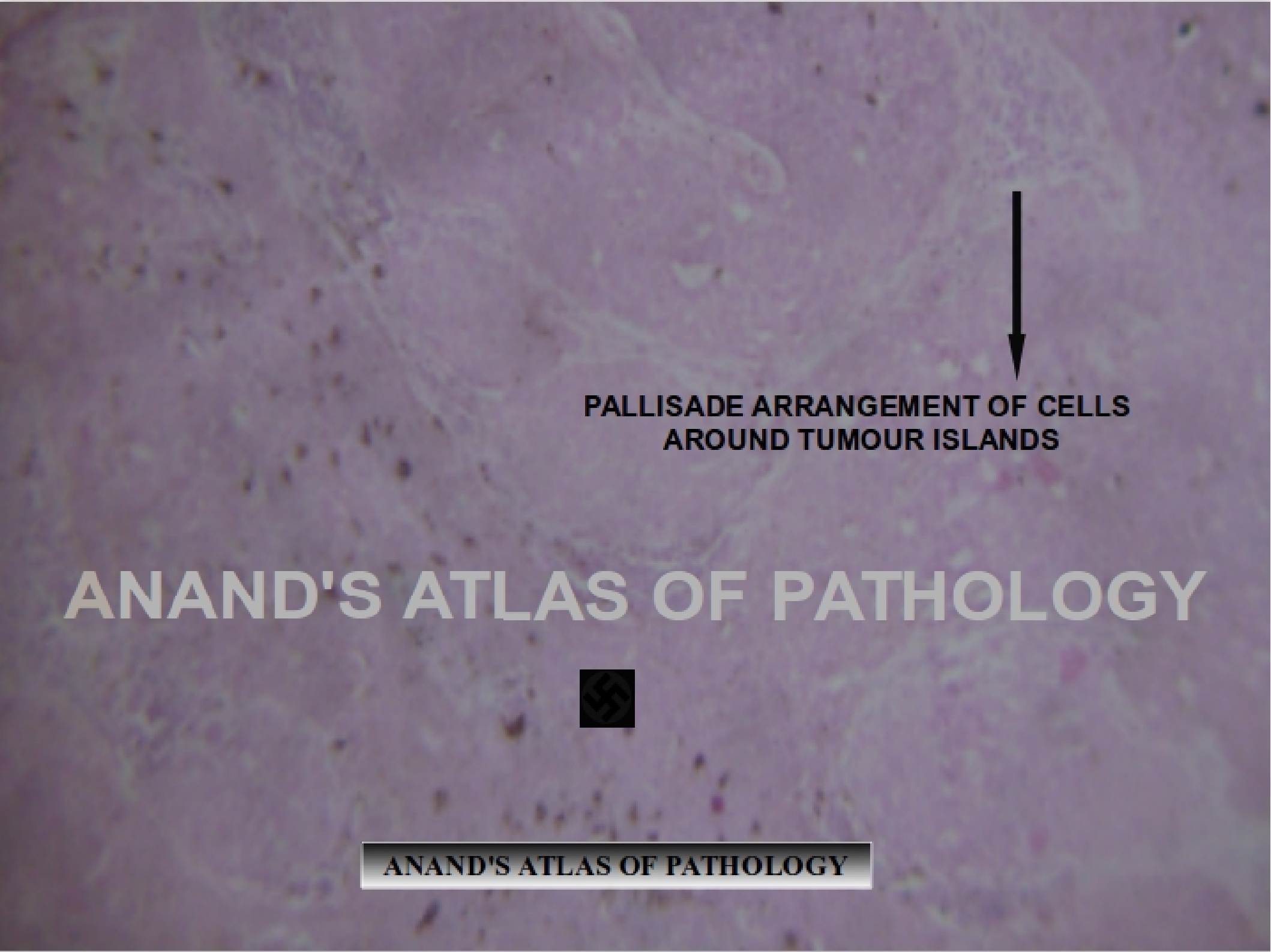
BASAL CELL CARCINOMA – RODENT ULCER

**USUALLY CHARACTERISED BY AN ULCER EITHER IN THE
FOREHEAD OR FACE**

THE ULCER IS FIXED TO THE UNDERLYING TISSUE

**THE EDGES OF THE ULCER LOOK LIKE
AS IF THEY HAVE BEEN
GNAWED BY A RAT**

HENCE THE NAME RODENT ULCER



A microscopic image of tissue stained with hematoxylin and eosin (H&E). The image shows a dense field of cells. In the center-right, there is a cluster of cells arranged in a palisade pattern, which is a characteristic feature of certain types of tumors. A black arrow points down to this cluster.

**PALLISADE ARRANGEMENT OF CELLS
AROUND TUMOUR ISLANDS**

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BASAL CELL CARCINOMA – RODENT ULCER

SLOW GROWING TUMOUR

**OCCURS AT SITES CHRONICALLY EXPOSED
TO SUNLIGHT**

**TUMOURS PRESENT AS PEARLY PAPULES
WITH TELANGIECTASIA**

**ADVANCED LESIONS ULCERATE AND
CAUSES EXTENSIVE LOCAL INVASION**

BASAL CELL CARCINOMA – RODENT ULCER

**TUMOUR CELLS RESEMBLE THOSE IN
NORMAL BASAL LAYER**

**GROWTH PATTERN CAN BE MULTIFOCAL OR
NODULAR LESIONS**

**PALLISADING ARRANGEMENT OF CELLS
AROUND TUMOUR CELL ISLANDS**

**SEPARATION ARTIFACTS ASSIST IN
DIFFERENTIATING BASAL CELL CARCINOMA
FROM OTHER TUMOURS**

PLEOMORPHIC ADENOMA

**PLEOMORPHIC ADENOMA USUALLY
OCCURS AS A PAINLESS
GROWTH IN THE
PAROTID REGION**

**TUMOUR CELLS EMBEDDED IN
LOOSE CONNECTIVE
TISSUE STROMA**



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PLEOMORPHIC ADENOMA

MIXED TUMOUR OF SALIVARY GLANDS

**IT IS A BENIGN EPITHELIAL NEOPLASM PRODUCING
GLAND PATTERNS**

**A SLOW GROWING, WELL DEMARCATED,
ENCAPSULATED LESION**

COMMONLY AFFECTS PAROTID GLAND

**CHARACTERISED BY PAINLESS SWELLING AT THE
ANGLE OF THE JAW**

PLEOMORPHIC ADENOMA

HISTOLOGICAL PICTURE - HETEROGENOUS APPEARANCE

TUMOUR CELLS FORM DUCTS, ACINI, TUBULES AND STRANDS OF CELLS

EPITHELIAL CELLS ARE SMALL AND DARK RANGING FROM CUBOIDAL TO SPINDLE FORMS

EPITHELIAL ELEMENTS ARE INTERMINGLED IN LOOSE MYXOID CONNECTIVE TISSUE STROMA

SOMETIMES ISLANDS OF CHONDROID OR BONE ARE SEEN

CIRRHOSIS OF LIVER

**PATIENT USUALLY IS A CHRONIC ALCOHOLIC
PRESENTING WITH HEMATEMESIS, MALENA
AND ABDOMINAL DISTENSION**

LIVER BIOPSY IS DONE

DISRUPTION OF NORMAL ARCHITECTURE OF HEPATOCYTES

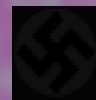
BRIDGING FIBROUS SEPTA ARE SEEN



MALLORY BODY



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CIRRHOSIS OF LIVER

IT IS AN END STAGE OF CHRONIC LIVER DISEASE
CHRONIC ALCOHOLISM - FATTY LIVER
THERE IS DISRUPTION OF NORMAL ARCHITECTURE OF LIVER

BRIDGING FIBROUS SEPTA IN THE FORM OF DELICATE BANDS OR BROAD SCARS REPLACING MULTIPLE ADJACENT LOBULES ARE SEEN (FIBROSIS)

PARENCHYMAL NODULES ARE CREATED BY REGENERATION OF ENCIRCLED HEPATOCYTES VARYING IN SIZE ARE SEEN

MALLORY BODIES ARE SEEN

LOBAR PNEUMONIA

**PATIENT USUALLY PRESENTS WITH FEVER,
MALAISE, COUGH WITH EXPECTORATION
OF SPUTUM AND SEPTICEMIA IS A
PRESENTING FEATURE**

LUNG BIOPSY IS DONE

LOBECTOMY IS DONE IN EXTREME CASES



**RED
HEPATISATION**



**GREY
HEPATISATION**

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LOBAR PNEUMONIA

**IT IS A ACUTE BACTERIAL PNEUMONIA
USUALLY CAUSED BY STREPTOCOCCUS
PNEUMONIAE**

**EVOLUTION OF DISEASE IS THROUGH FOUR
STAGES**

**STAGE OF CONGESTION, RED HEPATISATION,
GRAY HEPATISATION AND RESOLUTION**

LOBAR PNEUMONIA

IN STAGE OF RED HEPATISATION, ALVEOLAR SPACES ARE PACKED WITH NEUTROPHILS, RED CELLS AND FIBRIN

IN STAGE OF GRAY HEPATISATION, RED CELLS GET LYSSED

IN STAGE OF RESOLUTION, EXUDATES WITHIN ALVEOLI ARE ENZYMATICALLY DIGESTED AND EITHER UNDERGO RESORPTION OR IS EXPECTORATED

SEMINOMA TESTIS

**MALE PATIENT USUALLY PRESENTS
WITH A PAINLESS MASS IN
THE SCROTUM**

**TESTICULAR BIOPSY IS DONE FOR
CONFIRMATION OF DIAGNOSIS**

ORCHIDECTOMY IS DONE

LYMPHOCYTIC INFILTRATION IS SEEN



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SEMINOMA TESTIS

IT IS A GERM CELL TUMOUR

CRYPTORCHIDISM IS A COMMONLY ASSOCIATED CAUSE

IT IS COMPOSED OF LARGE CELLS WITH DISTINCT CELL BORDERS, CLEAR GLYCOGEN RICH CYTOPLASM

PRESENCE OF ROUND NUCLEI WITH CONSPICUOUS NUCLEOLI

CELLS ARE ARRANGED IN SMALL LOBULES WITH INTERVENING FIBROUS SEPTA

LYMPHOCYTIC INFILTRATION IS SEEN

GRANULOMATOUS INFLAMMATORY REACTION CAN BE PRESENT

OSTEOCLASTOMA - GIANT CELL TUMOUR

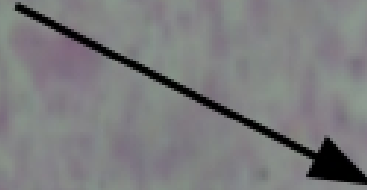
**PRESENTS AS A CYSTIC
BONY LESION**

USUALLY AROUND THE 2ND AND 3RD DECADE

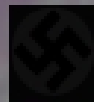
LONG BONES ARE AFFECTED

**LESIONS ARE PRESENT AROUND
THE EPIPHYSIS**

OSTEOCLAST LIKE GIANT CELLS



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OSTEOCLASTOMA - GIANT CELL TUMOUR

ALSO KNOWN AS GIANT CELL TUMOUR OF BONE

THE NEOPLASM CONTAINS LARGE NUMBERS OF OSTEOCLAST LIKE GIANT CELLS ADMIXED WITH MONONUCLEAR CELLS

USUALLY ARISES FROM EPIPHYSES OF LONG BONES

DISTAL FEMUR, PROXIMAL TIBIA, PROXIMAL HUMERUS AND DISTAL RADIUS ARE USUAL SITES

OSTEOCLASTOMA - GIANT CELL TUMOUR

**MULTINUCLEATED GIANT CELLS ARE
THE CLASSICAL HISTOLOGICAL
PICTURE**

**GIANT CELLS ARE DERIVED FROM
FUSION OF MONOCYTES**

**NEOPLASTIC COMPONENT IS MADE
OF ROUND TO SPINDLE SHAPED
MONONUCLEAR CELLS**

RENAL CELL CARCINOMA

**PATIENT PRESENTS WITH MASS
IN THE ABDOMEN**

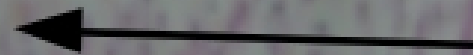
**PAINLESS HAEMATURIA AND
COSTOVERTEBRAL PAIN**

OCCURS AFTER THE 4TH DECADE

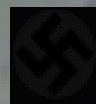
**RENAL BIOPSY IS DONE FOR
CONFIRMATION OF DIAGNOSIS**

NEPHRECTOMY IS DONE

VACUOLATED TUMOUR CELLS



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RENAL CELL CARCINOMA

THESE TUMOURS ARE DERIVED FROM
RENAL TUBULAR EPITHELIUM
HENCE THEY PREDOMINANTLY AFFECT
THE CORTEX OF THE KIDNEY

THREE TYPES - CLEAR CELL CARCINOMA,
PAPILLARY RENAL CELL CARCINOMA AND
CHROMOPHOBE RENAL CARCINOMA
CLEAR CELL CARCINOMA IS THE MOST
COMMONEST TYPE

RENAL CELL CARCINOMA

TUMOR CELLS APPEAR VACUOLATED DUE TO PRESENCE OF LIPID MATERIAL AND CAN BE DEMARCATED ONLY BY THEIR CELL MEMBRANE THEIR NUCLEI ARE SMALL AND ROUND

ALSO SEEN ARE GRANULAR CELLS RESEMBLING TUBULAR EPITHELIUM WHICH HAVE SMALL ROUND REGULAR NUCLEI ENCLOSED WITHIN GRANULAR PINK CYTOPLASM

CONNECTIVE TISSUE STROMA IS USUALLY SCANT BUT HIGHLY VASCULARISED

CHRONIC PYELONEPHRITIS

**PATIENT IS A DIABETIC
PRESENTING WITH FEVER,
MALAISE AND BACKPAIN
PYURIA IS A PRESENTING FEATURE
ULTRASOUND AND RENAL BIOPSY
LEADS TO CONFIRMATION
OF DIAGNOSIS**

NEPHRECTOMY IS DONE IN EXTREME CASES

THYROIDISATION

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CHRONIC PYELONEPHRITIS

THIS CONDITION PREDOMINANTLY PRESENTS WITH INTERSTITIAL INFLAMMATION AND SCARRING OF RENAL PARENCHYMA ASSOCIATED WITH VISIBLE SCARRING AND DEFORMITY OF PELVICALYCEAL SYSTEM UNEVEN INTERSTITIAL FIBROSIS, INFLAMMATORY INFILTRATE OF LYMPHOCYTES AND PLASMA CELLS ARE SEEN

CHRONIC PYELONEPHRITIS

DILATATION OR CONTRACTION OF LOBULES WITH ATROPHY OF LINING EPITHELIUM ARE SEEN

COLLOID CASTS THAT SUGGEST APPEARANCE OF THYROID TISSUE CALLED AS **THYROIDISATION IS SEEN**

CHRONIC INFLAMMATORY INFILTRATION AND FIBROSIS OF CALYCEAL MUCOSA AND WALL CAN BE VISUALISED

VESICULAR MOLE

**FEMALE PATIENT USUALLY PRESENTS
WITH AMENORRHOEA AND BLEEDING
PER VAGINUM**

**GROSS APPEARANCE RESEMBLES
GRAPE LIKE MASSES**

SERUM HCG LEVELS ARE ELEVATED

DILATATION AND CURETTAGE IS DONE

**HYDROPIC SWELLING OF
CHORIONIC VILLI**



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VESICULAR MOLE

IT IS A GESTATIONAL TROPHOBLASTIC DISEASE

ALSO KNOWN AS HYDATIDIFORM MOLE

**IT CAN BE COMPLETE OR PARTIAL
CHARACTERISED BY VOLUMINOUS MASS
OF SWOLLEN, CYSTICALLY DILATED
CHORIONIC VILLI APPEARING LIKE A
BUNCH OF GRAPES**

VESICULAR MOLE

**HISTOLOGICAL PICTURE - HYDROPIC
SWELLING OF CHORIONIC VILLI AND ABSENCE
OF VASCULARISATION OF THE VILLI
THE CENTRAL SUBSTANCE OF THE VILLI IS
LOOSE MYXOMATOUS AND OEDEMATOUS
STROMA
THE CHORIONIC EPITHELIUM SHOWS SOME
DEGREE OF PROLIFERATION OF
CYTOTROPHOBLAST AND
SYNCYTIOTROPHOBLAST**

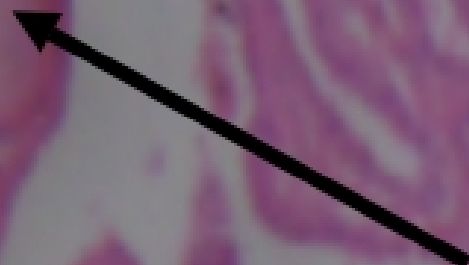
PAPILLARY CARCINOMA OF THYROID

**PRESENTS AS A SOLITARY NODULE
IN THE MIDLINE OF THE NECK**

SWELLING IS OF A SHORT DURATION

ACCOMPANIED BY HOARSENESS OF VOICE

BIOPSY IS THE INVESTIGATIVE PROCEDURE



PSAMMOMA BODY

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PAPILLARY CARCINOMA OF THYROID

**MOST COMMON FORM OF THYROID
MALIGNANCY
NUCLEI OF MALIGNANT CELLS CONTAIN
FINELY DISPERSED CHROMATIN
PRESENTING A GROUND GLASS
APPEARANCE
PAPILLARY ARCHITECTURE IS PRESENT
NEOPLASTIC PAPILLAE HAVE DENSE
FIBROVASCULAR CORES**

PAPILLARY CARCINOMA OF THYROID

**CONCENTRICALLY CALCIFIED
STRUCTURES CALLED AS
PSAMMOMA BODIES ARE PRESENT
WITHIN THE PAPILLAE
SOME TUMOURS ARE COMPOSED
PREDOMINANTLY OF FOLLICLES
ONLY**

**METASTASIS IS USUALLY TO THE
ADJACENT LYMPH NODES**

ADENOCARCINOMA OF STOMACH

**PATIENT PRESENTS WITH SEVERE PAIN IN
THE ABDOMEN, LOSS OF APETITE AND
WEIGHT LOSS**

BIOPSY IS CONFIRMATORY

**PARTIAL OR SUBTOTAL
GASTRECTOMY IS DONE**

**NEOPLASTIC GROWTH IN
GLANDULAR PATTERN**



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ADENOCARCINOMA OF STOMACH

**ADENOCARCINOMA IS A LESION IN WHICH
NEOPLASTIC EPITHELIAL CELLS GROW IN
GLAND PATTERNS**

**IN EARLY STAGE THE LESION IS CONFINED TO
MUCOSA AND SUBMUCOSA**

**IN ADVANCED STAGE THE LESION EXTENDS
BELOW THE SUBMUCOSA INTO THE
MUSCULAR WALL**

**METASTASIS - LYMPHATIC SPREAD - LEFT
SUPRACLAVICULAR LYMPHADENITIS -
VIRCHOW'S NODES**

ADENOCARCINOMA OF STOMACH

**HISTOLOGICAL TYPES - INTESTINAL AND
DIFFUSE VARIANTS**

**INTESTINAL - MALIGNANT CELLS
FORMING NEOPLASTIC INTESTINAL
GLANDS RESEMBLING COLONIC
ADENOCARCINOMA**

**DIFFUSE - GASTRIC TYPE MUCOSAL
CELLS, THEY DO NOT FORM GLANDS -
SIGNET RING CELLS ARE SEEN**

**TRANSCOELOMIC SPREAD - TO OVARIES
CAUSES KRUKENBERG'S TUMOUR**

PROLIFERATIVE ENDOMETRIUM

**FEMALE PATIENT PRESENTS
WITH HISTORY OF INFERTILITY**

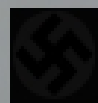
**ENDOMETRIAL BIOPSY AND
CURETTAGE IS DONE**



EPITHELIAL CELLS

ENDOMETRIAL CRYPT

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PROLIFERATIVE ENDOMETRIUM

IT IS THE OESTROGEN PHASE OF THE OVARIAN CYCLE

AFTER MENSTRUATION ONLY A THIN LAYER OF ENDOMETRIAL STROMA LIES AT THE BASE OF ORIGINAL ENDOMETRIUM

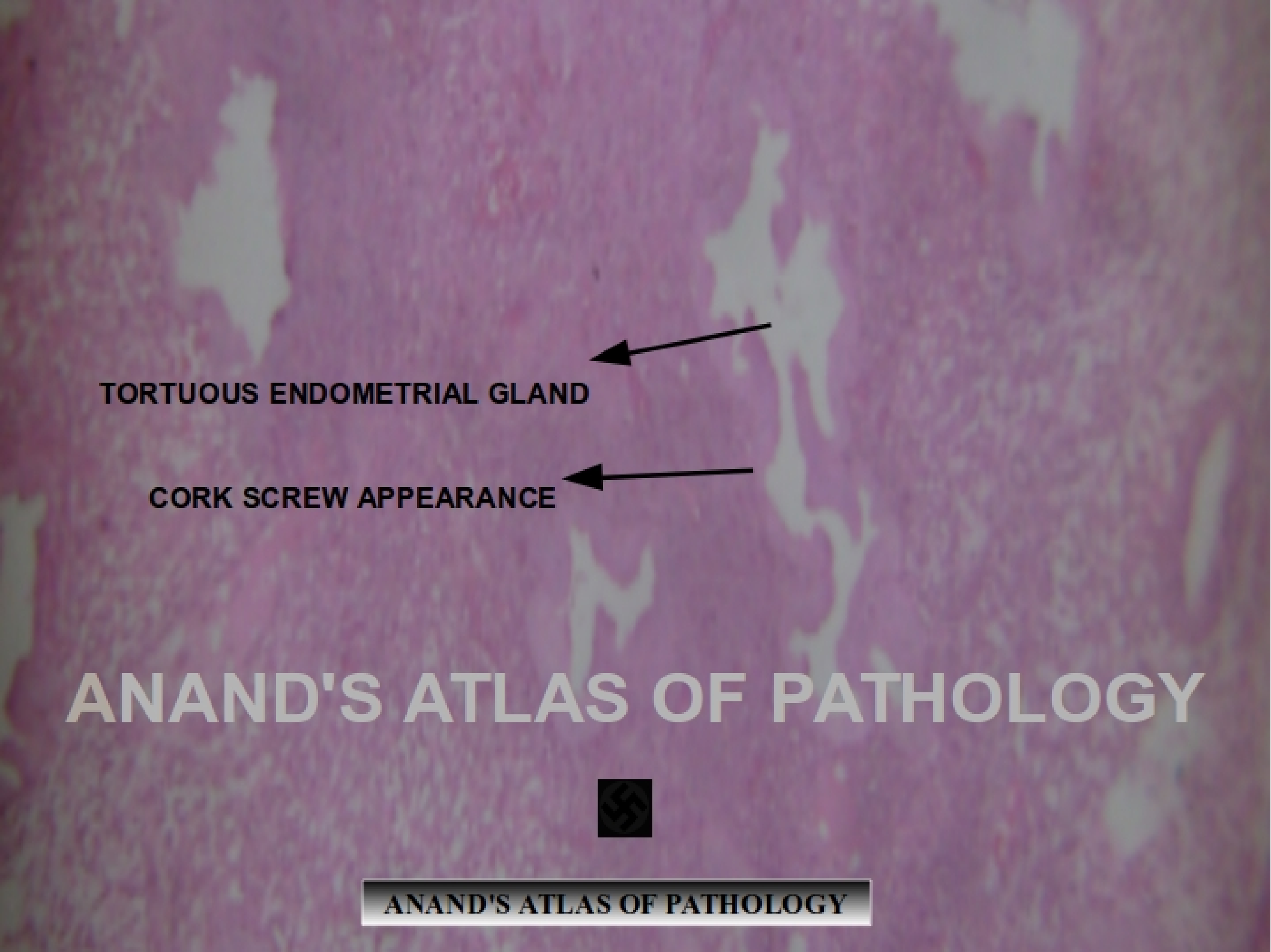
ONLY EPITHELIAL CELLS ARE LEFT IN THE REMAINING DEEP PORTIONS OF GLANDS AND CRYPTS OF ENDOMETRIUM

THE STROMAL CELLS AND EPITHELIAL CELLS PROLIFERATE RAPIDLY UNDER THE INFLUENCE OF OESTROGEN

SECRETORY ENDOMETRIUM

**RELATIVELY YOUNG FEMALE
PATIENT PRESENTS WITH
HISTORY OF INFERTILITY**

**PREMENSTRUAL ENDOMETRIAL
CURETTAGE IS DONE**



TORTUOUS ENDOMETRIAL GLAND

CORK SCREW APPEARANCE

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SECRETORY ENDOMETRIUM

IT IS THE **PROGESTERONE** PHASE OF THE
OVARIAN CYCLE

THE ENDOMETRIAL GLANDS INCREASE IN
TORTUOSITY PRESENTING A **CORK SCREW**
APPEARANCE

EXCESS OF SECRETORY SUBSTANCES
ACCUMULATE IN THE GLANDULAR EPITHELIAL
CELLS

CYTOPLASM OF THE STROMAL CELLS ALSO
INCREASE

THERE IS ALSO AN INCREASE OF LIPID AND
GLYCOGEN DEPOSITS IN THE STROMAL CELLS

BENIGN HYPERPLASIA OF PROSTATE

**PATIENT IS USUALLY AN ELDERLY MALE IN THE
6TH DECADE OF LIFE**

**PRESENTING COMPLAINTS INCLUDE FREQUENT
MICTURITION, URGENCY,
DRIBBLING DROPLETS OF URINE
AND PAIN**

PROSTATECTOMY IS DONE



CORPORA AMYLACEA

HYPERPLASTIC NODULE

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BENIGN HYPERPLASIA OF PROSTATE

**ALSO KNOWN AS NODULAR HYPERPLASIA,
GLANDULAR AND STROMAL HYPERPLASIA
CHARACTERISED BY PROLIFERATION OF
EPITHELIAL AND STROMAL ELEMENTS
RESULTING IN ENLARGEMENT OF THE
GLAND**

**ENLARGEMENT RESULTS IN URINARY
OBSTRUCTION**

**ANDROGENS AND OESTROGENS PLAY A
SYNERGISTIC ROLE IN DEVELOPMENT OF
THIS CONDITION**

BENIGN HYPERPLASIA OF PROSTATE

IT ARISES FROM THE PERIURETHRAL GLANDS OF THE PROSTATE

HYPERPLASTIC NODULES ARE COMPOSED OF VARYING PROPORTIONS OF PROLIFERATING GLANDULAR ELEMENTS AND FIBROMUSCULAR STROMA

HYPERPLASTIC GLANDS ARE LINED BY TALL COLUMNAR CELLS AND A PERIPHERAL LAYER OF FLATTENED BASAL CELLS

GLANDULAR LUMEN USUALLY CONTAINS PROTEINACEOUS SECRETORY MATERIAL CALLED AS CORPORA AMYLACEA

COLLOID GOITRE

PREDOMINANTLY SEEN IN YOUNG FEMALES

**PRESENTS AS GLOBULAR SWELLING
OF THE THYROID GLAND
OF LONG STANDING DURATION**

BIOPSY IS CONFIRMATORY

EXCISION OF MASS IS DONE

CUT SECTION OF MASS REVEALS BROWNISH COLLOID

COLLOID RICH THYROID FOLLICLE

EPITHELIUM OF THYROID FOLLICLE

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COLLOID GOITRE

GOITRE IS A SIMPLE ENLARGEMENT OF THYROID GLAND

IT IS THE MOST COMMON THYROID DISEASE

IF DIETARY IODINE INCREASES OR DEMANDS FOR THYROID HORMONE DECREASES, THE STIMULATED FOLLICULAR EPITHELIUM INVOLUTES TO FORM AN ENLARGED COLLOID RICH GLAND CALLED AS COLLOID GOITRE

THE FOLLICULAR EPITHELIUM IS HYPERPLASTIC AND MAY BE FLATTENED OR CUBOIDAL DEPENDING ON THE LEVEL OF COLLOID

LEIOMYOMA OF UTERUS (FIBROID UTERUS)

**FEMALE PATIENT PRESENTS
WITH COMPLAINTS OF MENORRHAGIA
URINARY DISTURBANCE AND LOW BACKACHE**

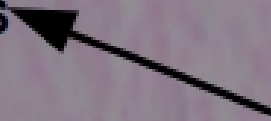
**ULTRASONOGRAPHY REVEALS MASS IN
THE UTERINE WALLS**

MAY BE SINGLE OR MULTIPLE

OCCURS AROUND THE 4TH DECADE

**HYSTERECTOMY IS A PREFERRED
TREATMENT MODALITY**

WHORLING BUNDLES OF SMOOTH MUSCLE CELLS



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LEIOMYOMA OF UTERUS (FIBROID UTERUS)

BENIGN TUMOUR ARISING FROM SMOOTH MUSCLE CELLS IN THE MYOMETRIUM OF UTERUS ARE TERMED AS LEIOMYOMAS ALSO CALLED AS FIBROID UTERUS MICROSCOPICALLY IT SHOWS WHORLING BUNDLES OF SMOOTH MUSCLE CELLS DUPLICATING THE ARCHITECTURE OF NORMAL MYOMETRIUM. FOCI OF FIBROSIS, CALCIFICATION, ISCHAEMIC NECROSIS, CYSTIC DEGENERATION AND HAEMORRHAGE MAY BE PRESENT

ACUTE APPENDICITIS

**YOUNG INDIVIDUAL PRESENTS WITH
SUDDEN ONSET OF FEVER, VOMITTING
AND ABDOMINAL PAIN**

**TENDERNESS IS PRESENT IN THE
RIGHT ILIAC FOSSA**

BLOOD SMEAR REVEALS NEUTROPHILIA

**ULTRASONOGRAPHY REVEALS AN ENLARGED
AND INFLAMMED APPENDIX**

APPENDICECTOMY IS DONE

A histological slide stained with hematoxylin and eosin (H&E) showing a large area of tissue necrosis. The necrotic area is characterized by a loss of cellular structure and is indicated by a black arrow. The surrounding tissue shows normal cellular morphology with distinct nuclei and cytoplasm.

TISSUE NECROSIS

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ACUTE APPENDICITIS

IN EARLY STAGES SCANT NEUTROPHILIC EXUDATES WILL BE FOUND IN THE COATS OF THE APPENDIX

THE INFLAMMATORY REACTION TRANSFORMS NORMAL GLISTENING SEROSA INTO A DULL, GRANULAR RED MEMBRANE

IN LATER STAGES, PROMINENT NEUTROPHILIC EXUDATE GENERATES A FIBROPURULENT REACTION OVER SEROSA THIS LEADS TO AN ABSCESS FORMATION

ACUTE APPENDICITIS

ABSCESS FORMATION WITHIN THE WALLS LEADS TO ULCERATIONS AND FOCI OF NECROSIS IN THE MUCOSA

FURTHER DETERIORATION RESULTS IN GANGRENOUS NECROSIS OF APPENDICULAR MUCOSA

TUBERCULOUS LYMPHADENITIS

**PATIENT PRESENTS WITH
HISTORY OF TUBECULOSIS**

**MULTIPLE SWELLINGS / ENLARGEMENT
OF LYMPH NODES IN THE NECK**

**CERVICAL GROUP OF LYMPH NODES
ARE ENLARGED**

**LYMPH NODE EXCISION BIOPSY
IS CONFIRMATORY**

GRANULOMA

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TUBERCULOUS LYMPHADENITIS

**SECONDARY INFLAMMATION OF
DRAINING LYMPH NODES IS CALLED
AS LYMPHADENITIS**

**IT IS THE COMMONEST FORM OF
EXTRAPULMONARY TUBERCULOSIS**

**USUALLY OCCURS IN THE CERVICAL
REGION - SCROFULA**

TUBERCULOUS LYMPHADENITIS

**AFFECTED LYMPH NODES SHOW
GRANULOMATOUS INFLAMMATORY
REACTION**

**MAY FORM CASEATING OR NON CASEATING
TUBERCLES**

**GRANULOMAS ARE ENCLOSED WITHIN A
FIBROELASTIC RIM PUNCTUATED BY
LYMPHOCYTES**

**MULTINUCLEATED GIANT CELLS WILL BE
PRESENT IN THE GRANULOMAS**

RHINOSPOROIDOSIS


**COMMONLY OCCURS IN YOUNG
INDIVIDUALS**

PRESENTS AS A POLYP IN THE NOSE

**USUALLY INFECTION SPREADS
WHO COME IN CONTACT
WITH WATER BODIES LIKE
SWIMMING**

POLYPECTOMY IS DONE

EXCISION BIOPSY IS CONFIRMATORY



**FUNGAL SPHERULES CONTAINING
ENDOSPORES**

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RHINOSPOROIDOSIS

IT IS A CHRONIC GRANULOMATOUS DISEASE

A TYPE OF SUBCUTANEOUS MYCOSES

**CAUSATIVE FUNGUS IS RHINOSPORIDIUM
SEEBERI**

**MODE OF INFECTION IS NOT KNOWN BUT
THOUGHT TO ORIGINATE FROM STAGNANT
WATER OR AQUATIC LIFE**

**FUNGUS HAS NOT BEEN CULTIVATED IN A
LABORATORY**

RHINOSPOROIDOSIS

**CHARACTERISED BY DEVELOPMENT OF
FRIABLE POLYPS CONFINED TO NOSE,
MOUTH OR EYE**

**DISEASE IS LIMITED TO THE MUCOUS
MEMBRANES**

**MICROSCOPICALLY LESION SHOWS LARGE
NUMBERS OF FUNGAL SPHERULES**

**EMBEDDED IN A STROMA OF CONNECTIVE
TISSUE AND CAPILLARIES**

**THE SPHERULES CONTAIN THOUSANDS OF
ENDOSPORES**

MADURA MYCOSIS

OCCURS IN AGRICULTURAL WORKERS

ALSO KNOWN AS MADURA FOOT

HISTORY OF A PENETRATING INJURY IS PRESENT

**PATIENT PRESENTS WITH A MASS
IN THE FOOT WITH MULTIPLE
DISCHARGING SINUSES**

EXCISION BIOPSY IS DONE



**FUNGAL GRANULES CONTAINING
MADURELLA MYCETOMI**

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MADURA MYCOSIS

IT IS A TYPE OF SUBCUTANEOUS MYCOSES
DISEASE FIRST REPORTED FROM MADURAI
IN 1842

IT IS A CHRONIC SLOWLY PROGRESSING
FUNGAL INFECTION OF THE
SUBCUTANEOUS TISSUE

CAUSATIVE ORGANISM IS BELIEVED TO
ENTER THROUGH A MINOR TRAUMA
ORGANISM IS MADURELLA MYCETOMI

MADURA MYCOSIS

**DISEASE USUALLY BEGINS AS A
SWELLING IN THE FOOT
IT BURROWS INTO DEEPER TISSUES
AND RESULTS IN MULTIPLE
DISCHARGING SINUSES
MICROSCOPICALLY MICROCOLONIES
OF AETIOLOGICAL AGENTS IN THE
FORM OF GRANULES OR GRAINS CAN
BE DEMONSTRATED**

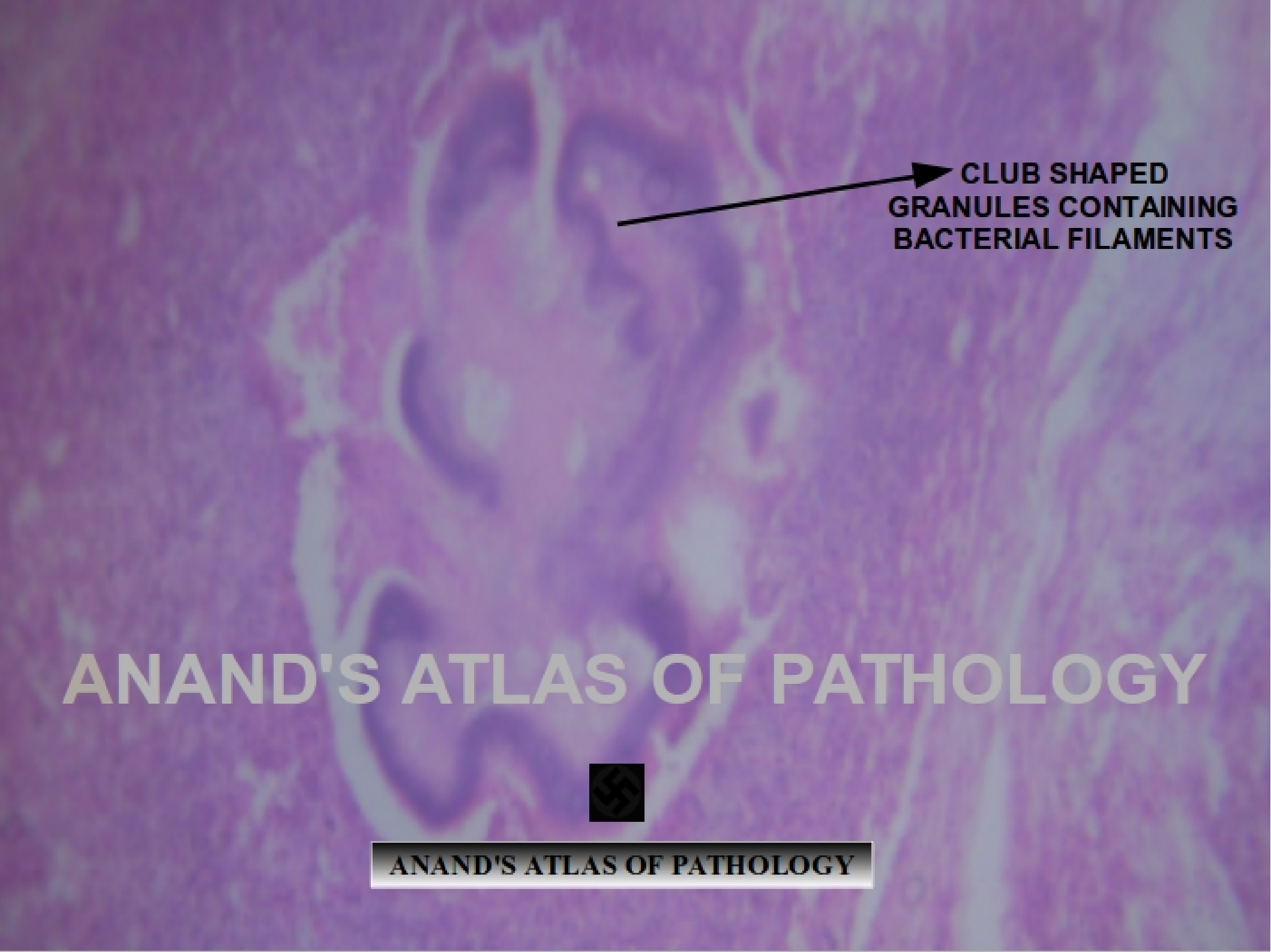
ACTINOMYCOSIS

PREDOMINANTLY SEEN IN FEMALES

**PRESENTS AS A MASS AROUND
THE CHEEKS AND THE JAW**

**MASS CONTAINS MULTIPLE
DISCHARGING SINUSES**

BIOPSY IS CONFIRMATORY



CLUB SHAPED
GRANULES CONTAINING
BACTERIAL FILAMENTS

A black arrow points from the text to a specific granule in the microscopic image.

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ACTINOMYCOSIS

**IT IS A CHRONIC GRANULOMATOUS INFECTION
CHARACTERISED BY INDURATED SWELLINGS,
SUPPURATION AND DISCHARGE OF SULPHUR
GRANULES**

**PRESENCE OF MULTIPLE DISCHARGING
SINUSES**

**CERVICOFACIAL TYPE PRESENTS WITH
INDURATED LESIONS ON THE CHEEK AND
SUBMAXILLARY REGIONS**

**ACTINOMYCOSES CAN ALSO PRESENT AS A
MYCETOMA**

ACTINOMYCOSIS

MICROSCOPICALLY THE GRANULES ARE BACTERIAL COLONIES WITH DENSE NETWORK OF FILAMENTS SURROUNDED BY A PERIPHERAL ZONE OF SWOLLEN RADIATING CLUB SHAPED STRUCTURES THIS IS SUN RAY APPEARANCE THE CLUBS ARE FORMED BY DEPOSITION OF LIPOID MATERIAL AROUND THE BACTERIAL FILAMENTS AS A PART OF TISSUE REACTION

FIBROADENOMA - MIXED

OCCURS IN YOUNG FEMALES

**PRESENTS AS A FREELY MOBILE MASS
IN THE BREAST**

ALSO KNOWN AS THE BREAST MOUSE

FNAC IS DONE

EXCISION BIOPSY IS DONE

FIBROELASTIC STROMA

GLANDULAR SPACE

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FIBROADENOMA - MIXED

FIBROADENOMA OF BREAST IS A COMMON MIXED TUMOUR

IT IS ALWAYS BENIGN, RARELY UNDERGOES MALIGNANT CHANGE

TUMOUR CONTAINS A MIXTURE OF PROLIFERATED DUCTAL ELEMENTS (ADENOMA) EMBEDDED IN A LOOSE FIBROUS TISSUE (FIBROMA)

IT APPEARS IN YOUNG WOMEN AND AN INCREASE IN OESTROGEN ACTIVITY IS THOUGHT TO PLAY A ROLE IN ITS DEVELOPMENT

FIBROADENOMA - MIXED

HISTOLOGICALLY THERE IS A LOOSE FIBROELASTIC STROMA CONTAINING DUCT LIKE EPITHELIUM LINED SPACES OF VARIOUS FORMS AND SIZES THESE GLANDULAR SPACES ARE LINED WITH SINGLE OR MULTIPLE LAYERS OF CELLS AND HAVE A WELL DEFINED INTACT BASEMENT MEMBRANE

SECTION - 2

CYTOLOGY SLIDES

LIST OF COLOUR PLATES

CARCINOMA OF BREAST

ASCITIC FLUID - SECONDARY DEPOSITS

CARCINOMA OF BREAST

OCCURS PREDOMINANTLY IN FEMALES

RARELY CAN OCCUR IN MALES ALSO

USUALLY PRESENTS AROUND THE 5TH DECADE

DIFFUSE MASS PRESENT IN THE BREAST

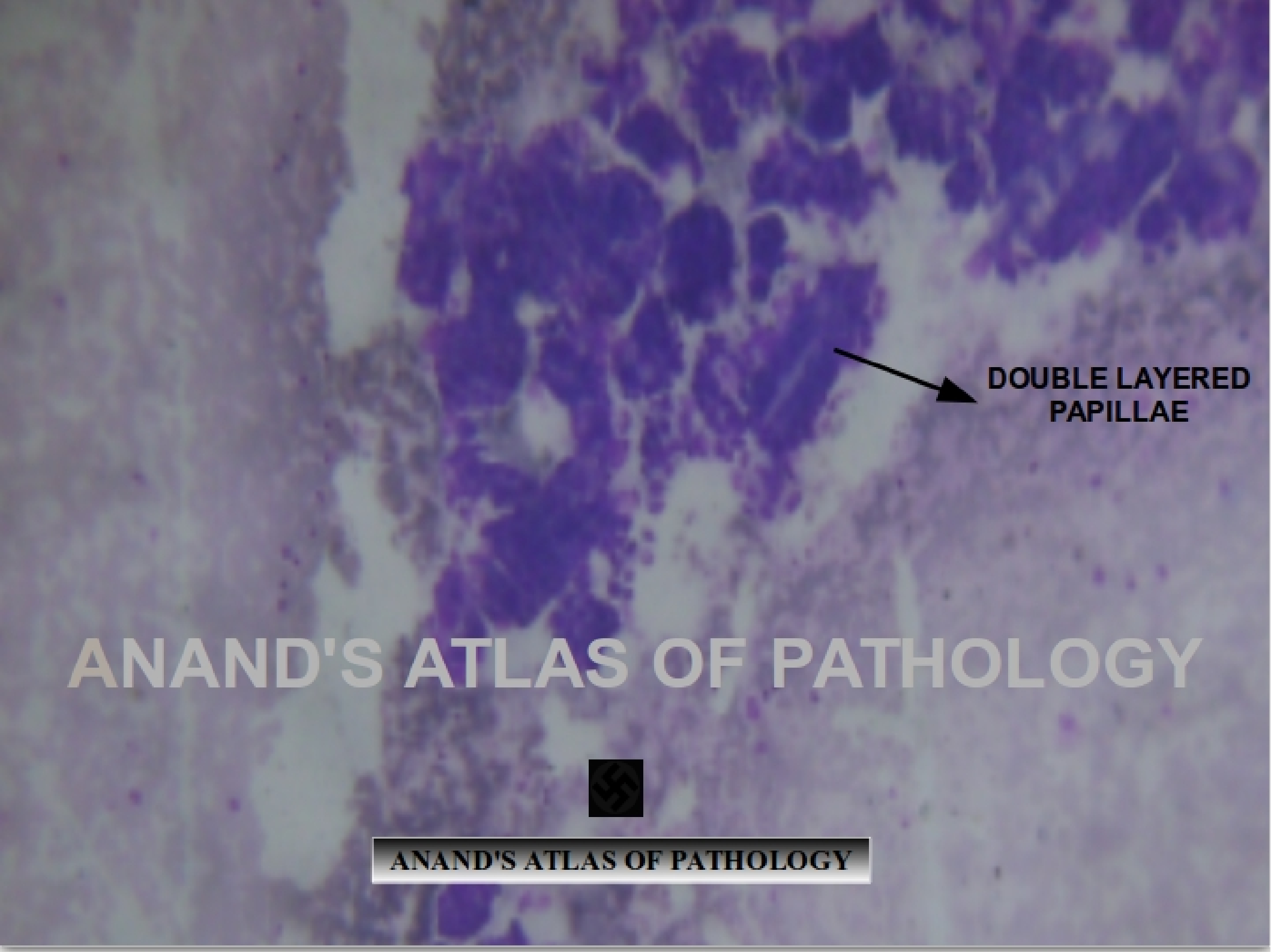
REGIONAL LYMPHADENITIS IS PRESENT

SKIN OVER THE BREAST RESEMBLES
AN ORANGE PEEL (PEAU D ORANGE)

NIPPLE IS RETRACTED

FNAC IS THE CHOICE OF INVESTIGATION

MASTECTOMY IS DONE

A histological slide stained with hematoxylin and eosin (H&E) showing a cluster of cells. The cells are arranged in a double-layered structure, with a layer of cells on top and another layer below. The nuclei are stained purple, and the cytoplasm and surrounding tissue are stained pink. An arrow points to the double-layered structure.

**DOUBLE LAYERED
PAPILLAE**

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CARCINOMA OF BREAST

FINE NEEDLE ASPIRATION CYTOLOGY IS A LABORATORY METHOD FOR DIAGNOSIS OF MALIGNANCY INVOLVES ASPIRATION OF CELLS FROM A MASS FOLLOWED BY CYTOLOGICAL EXAMINATION OF THE SMEAR DONE USUALLY IN PATIENTS NOT FIT FOR OPEN BIOPSY

CARCINOMA BREAST IS NOT COMMON IN WOMEN BELOW THE AGE OF 30 YEARS

CARCINOMA OF BREAST

FEATURES COMMON TO ALL INVASIVE CANCERS

BREAST LUMP

FIXITY TO CHEST WALL

RETRACTION OR DIMPLING OF NIPPLE

LYMPHOEDEMA

**PEAU D'ORANGE - THICKENING OF
SKIN AROUND EXAGGERATED HAIR
FOLLICLES**

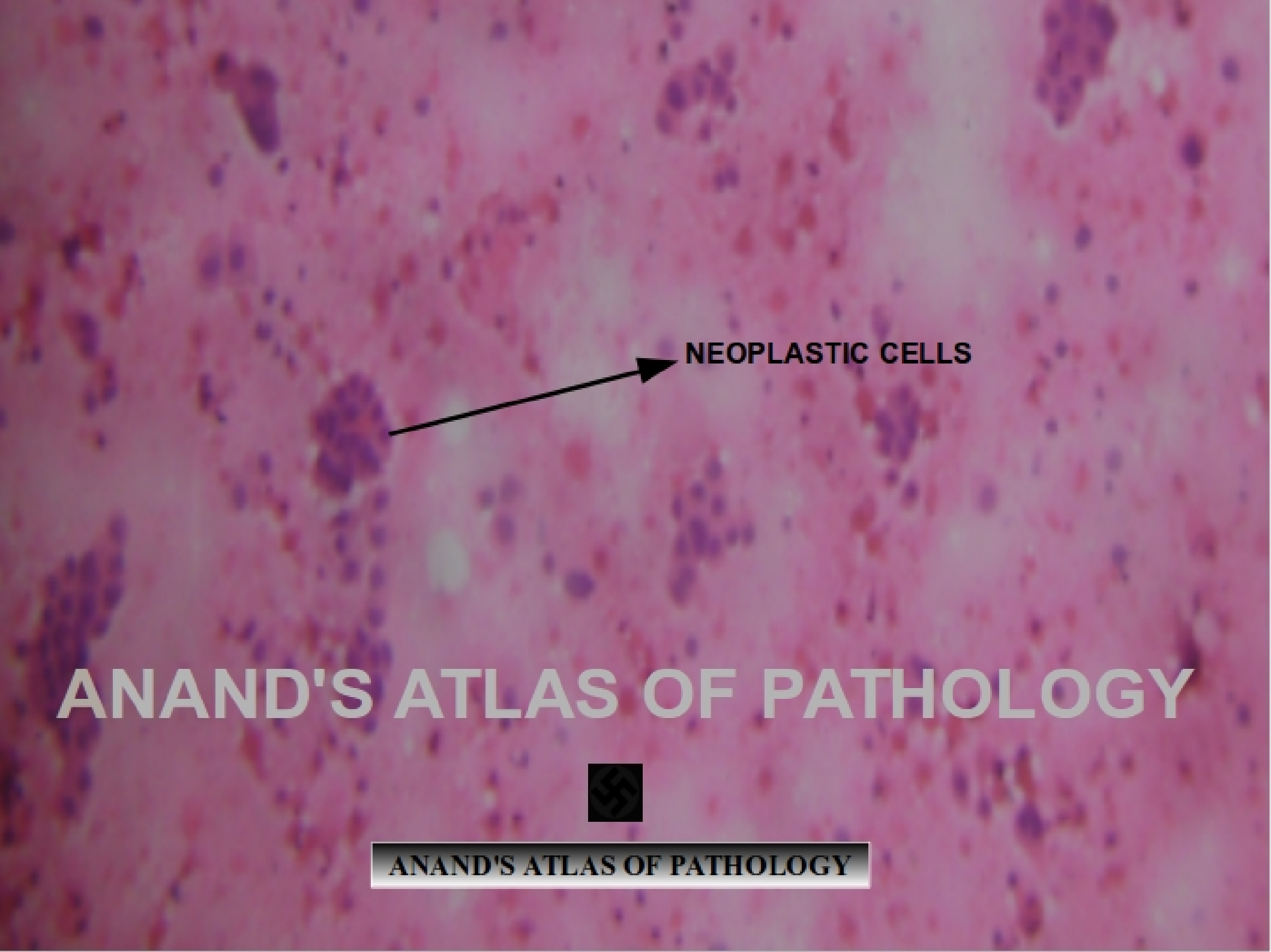
ASCITIC FLUID - SECONDARY DEPOSITS

**ASCITES – COLLECTION OF FLUID IN THE
GENERAL PERITONEAL CAVITY**

**THIS COLLECTION CAN BE SECONDARY TO
LIVER DYSFUNCTION OR MAY BE
DUE TO MALIGNANCY IN PELVIC ORGANS**

**THIS CASE PERTAINS TO MASS IN THE OVARY
IN A WOMAN IN THE 7TH DECADE**

THE ASPIRATED FLUID WAS HAEMORRHAGIC

A microscopic image of tissue stained with hematoxylin and eosin (H&E). The background is a pinkish-red color, representing the cytoplasm and extracellular matrix. Numerous small, dark purple clusters and individual cells are scattered throughout, representing the nuclei of various cells. An arrow points from the text 'NEOPLASTIC CELLS' to a specific cluster of these dark purple cells.

NEOPLASTIC CELLS

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ASCITIC FLUID - SECONDARY DEPOSITS

INCREASED FLUID IN INTERSTITIAL TISSUE SPACES IS TERMED AS OEDEMA

ACCUMULATION OF FLUID IN THE GENERAL PERITONEAL CAVITY IS TERMED AS HYDROPERITONEUM OR ASCITIS

ASCITIC FLUID ASPIRATION AND CYTOLOGICAL SMEAR PREPARATION IS A LABORATORY METHOD FOR DIAGNOSIS OF NEOPLASIA

PRIMARY IN THIS CASE - OVARIAN MALIGNANCY

ASCITIC FLUID - SECONDARY DEPOSITS

ASCITIC FLUID ASPIRATION AND CYTOLOGY IS DONE FOR DIAGNOSING PRIMARY SITE OF MALIGNANCY - FLUID IS USUALLY HAEMORRHAGIC PROBABLE SITES OF MALIGNANCY - ENDOMETRIUM OF UTERUS, LUNGS, URINARY BLADDER, PROSTATE AND STOMACH

NEOPLASTIC CELLS ARE LESS COHESIVE THAN NORMAL CELLS HENCE THEY ARE SHED INTO BODY FLUIDS - EXFOLIATION

SHED CELLS ARE EVALUATED FOR FEATURES OF ANAPLASIA INDICATIVE OF THEIR ORIGIN OF CANCER

SECTION - 3

HAEMATOLOGY SLIDES

LIST OF COLOUR PLATES

IRON DEFICIENCY ANAEMIA

NEUTROPHILIA

EOSINOPHILIA

ACUTE MYELOID LEUKEMIA

ACUTE LYMPHOCYTIC LEUKEMIA

CHRONIC MYELOID LEUKEMIA

CHRONIC LYMPHOCYTIC LEUKEMIA

MULTIPLE MYELOMA

IRON DEFICIENCY ANAEMIA

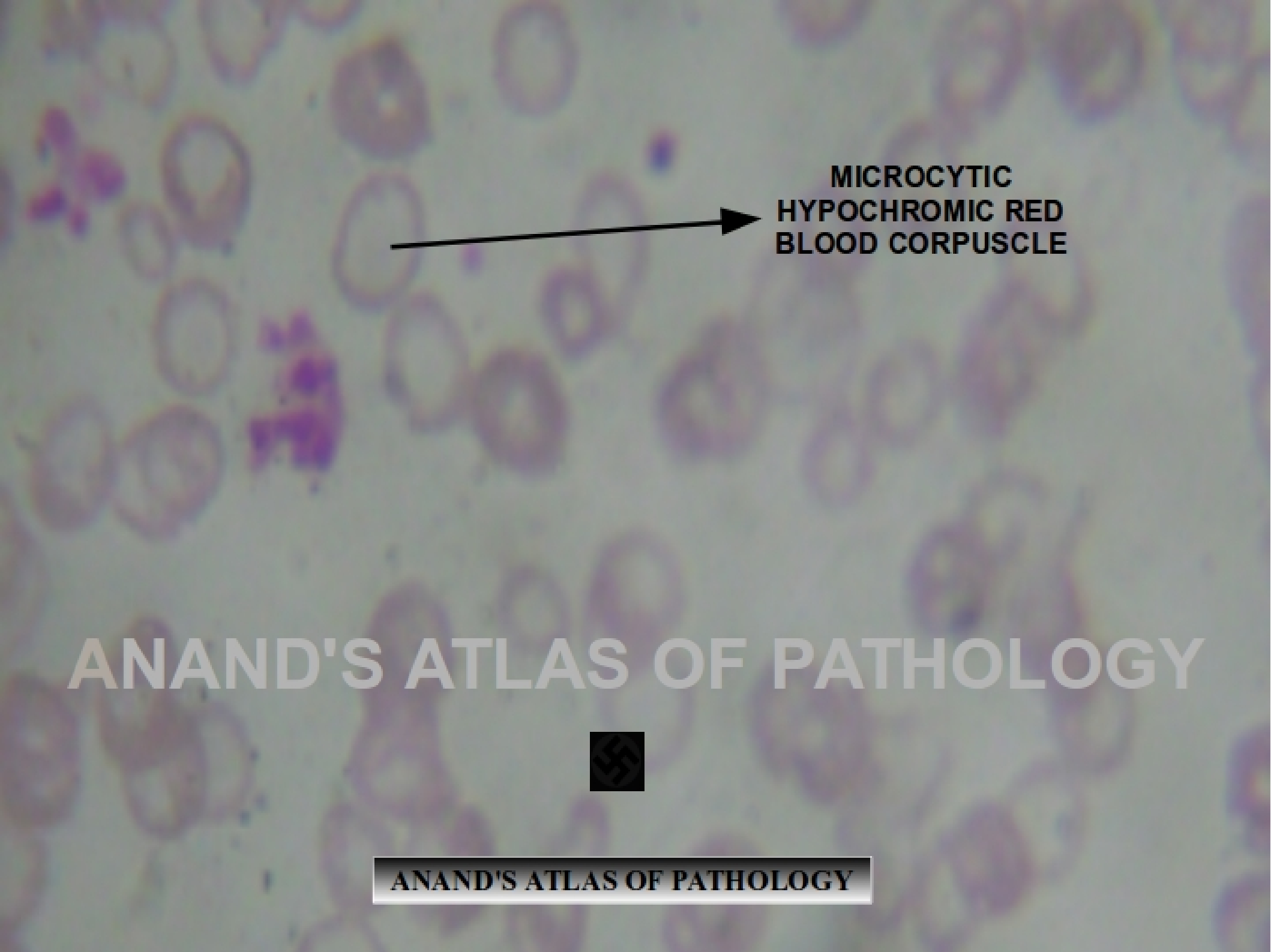
**THERE IS SEVERE REDUCTION
IN HAEMOGLOBIN %**

VERY COMMON IN WOMEN

**CAN ALSO OCCUR IN WORM INFESTATION
AND MALIGNANCY**

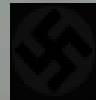
**PREGNANCY IS A PROBABLE
PHYSIOLOGICAL CAUSE**

**PERIPHERAL BLOOD SMEAR IS
THE COMMONEST INVESTIGATION**



**MICROCYTIC
HYPOCHROMIC RED
BLOOD CORPUSCLE**

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IRON DEFICIENCY ANAEMIA

MOST COMMONEST FORM OF NUTRITIONAL DEFICIENCY

MICROSCOPICALLY RBC'S ARE MICROCYTIC AND HYPOCHROMIC REFLECTING THE REDUCED MCV AND MCHC

IRON DEFICIENCY ANAEMIA IS USUALLY ACCOMPANIED BY AN INCREASE IN THE PLATELET COUNT

PICTURE WILL ALSO SHOW NORMOBLASTIC HYPERPLASIA

HAEMOSIDERIN IN CYTOPLASM FORM LARGE CLUSTERS

NEUTROPHILIA

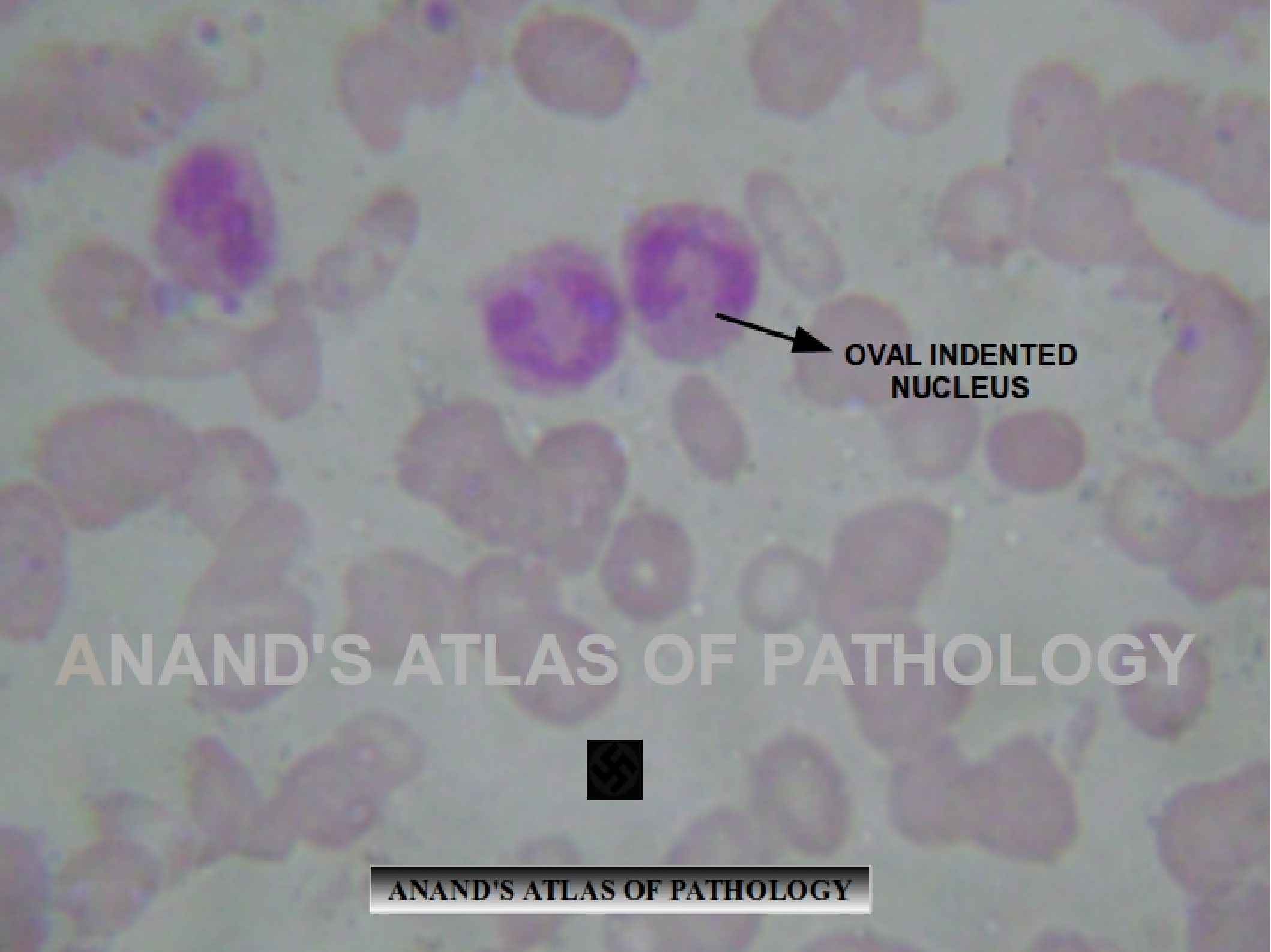
**PATIENT USUALLY PRESENTS
WITH FEVER AND MALAISE**

**COUGH WITH EXPECTORATION
IS PRESENT**

SPUTUM USUALLY RESEMBLES PUS

LUNG OPACITY IS SEEN IN AN XRAY

PERIPHERAL BLOOD SMEAR IS TAKEN



**OVAL INDENTED
NUCLEUS**

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NEUTROPHILIA

NEUTROPHILIA IS RELATIVELY A SELECTIVE INCREASE IN POLYMORPHONUCLEAR CELLS INDUCED BY BACTERIAL INFECTIONS
IT IS BASICALLY A NON NEOPLASTIC DISORDER OF WBC'S
MICROSCOPICALLY THERE ARE A LARGE NUMBER OF ATYPICAL LYMPHOCYTES
LYMPHOCYTES ARE CHARACTERISED BY ABUNDANT CYTOPLASM CONTAINING MULTIPLE CLEAR VACUOLATIONS AND AN OVAL INDENTED OR FOLDED NUCLEUS

EOSINOPHILIA

OCCURS IN YOUNG INDIVIDUALS

**PATIENTS PRESENT WITH FEVER AND
ASSOCIATED RIGORS**

**THERE IS UNILATERAL
PITTING OEDEMA IN
THE LOWER LIMB**

**PERIPHERAL BLOOD SMEAR
IS DONE**

INCREASED PRESENCE
OF
EOSINOPHILS



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EOSINOPHILIA

IT IS AN INCREASED COUNT OF EOSINOPHILS IN BLOOD DUE TO PARASITIC INFECTIONS AND ALLERGIC RESPONSES

THEY MIGRATE INTO TISSUES DISEASED BY PARASITES

THE EOSINOPHILS MIGRATE TOWARDS INFECTED TISSUE BECAUSE OF EOSINOPHIL CHEMOTACTIC FACTOR SECRETED BY MAST CELLS AND BASOPHILS

EOSINOPHILS ALSO DETOXYIFY INFLAMMATION

INDUCING SUBSTANCES SECRETED BY THE MAST CELLS AND BASOPHILS

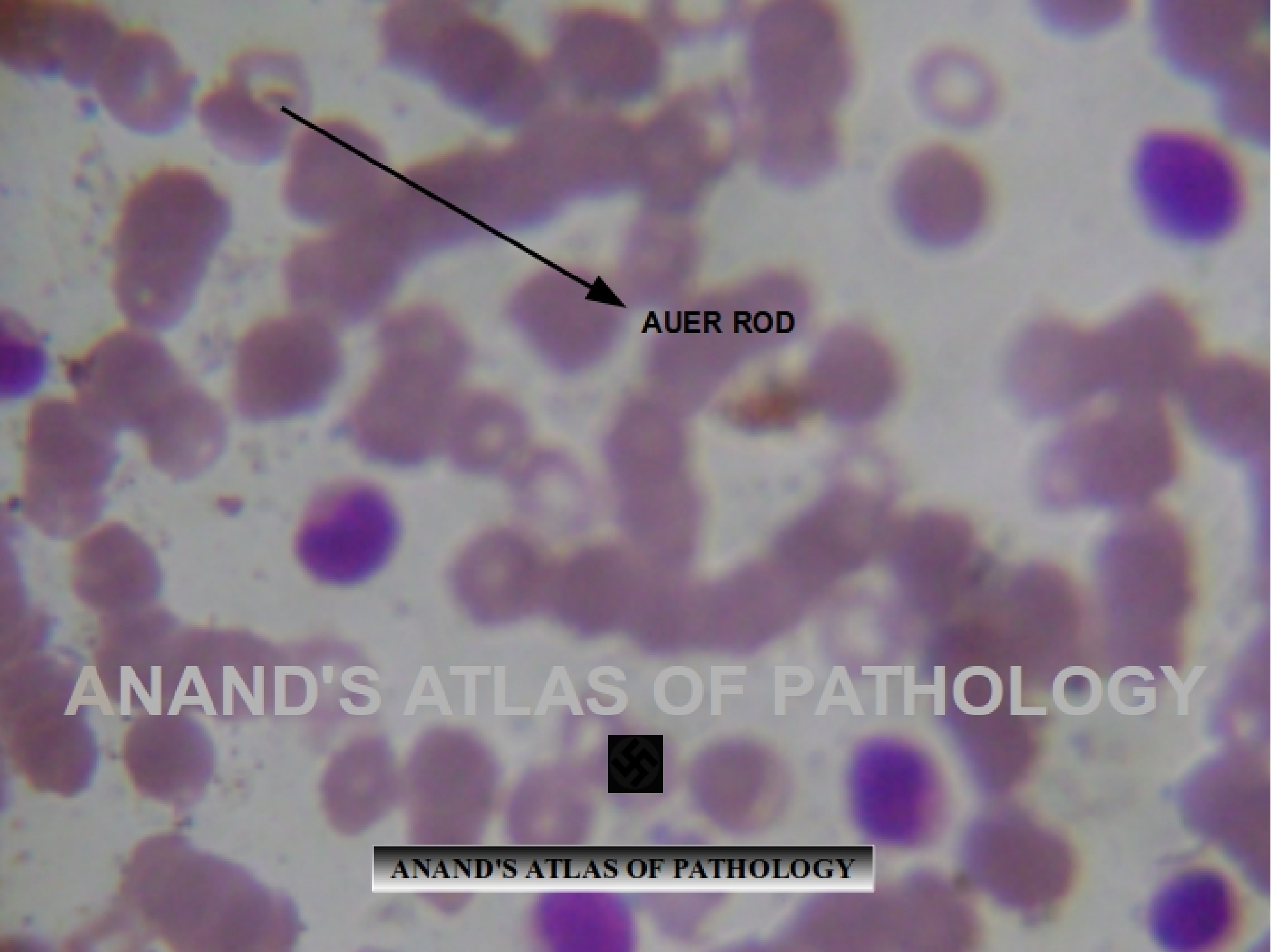
ACUTE MYELOID LEUKEMIA

AFFECTS YOUNG INDIVIDUALS

**PRESENTS WITH HISTORY OF
FEVER DURATION OF
THREE MONTHS AND ABOVE**

**THERE IS PRESENCE OF SEVERE
ANEMIA**

**PERIPHERAL BLOOD SMEAR
IS DONE**



AUER ROD

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ACUTE MYELOID LEUKEMIA

**MYELOBLASTS CAN BE DIFFERENTIATED FROM
LYMPHOBLASTS BY GIEMSA STAIN**

**BLAST CELLS HAVE DELICATE NUCLEAR
CHROMATIN**

THREE TO FIVE NUCLEOLI ARE SEEN

FINE AZUROPHILIC GRANULES IN CYTOPLASM

**DISTINCTIVE RED STAINING ROD LIKE
STRUCTURES CALLED AS AUER RODS ARE
PRESENT**

**AUER RODS ARE FOUND ONLY IN NEOPLASTIC
MYELOBLASTS**

ACUTE LYMPHOCYTIC LEUKEMIA

SEEN IN ADOLESCENTS

**PRESENTS WITH GENERALISED
LYMPHADENOPATHY**

SPLENOMEGALY

HEPATOMEGALY

LOSS OF WEIGHT

PERIPHERAL BLOOD SMEAR IS DONE

INCREASED COUNT OF
LYMPHOCYTES

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ACUTE LYMPHOCYTIC LEUKEMIA

LYMPHOCYTIC LEUKEMIAS ARE CAUSED BY INCREASED PRODUCTION OF LYMPHOID CELLS

THE NUCLEI ARE COARSE AND HAVE CLUMPED CHROMATIN

ONLY ONE OR TWO NUCLEOLI WILL BE PRESENT

CYTOPLASM CONTAINS LARGE AGGREGATES OF PAS POSITIVE MATERIAL

TO DIFFERENTIATE FROM AML -

MYELOBLASTS ARE PEROXIDASE POSITIVE

CHRONIC MYELOID LEUKEMIA

**USUALLY OCCURS IN THE
5TH DECADE**

**PATIENT PRESENTS WITH FEVER AND
MODERATE WEIGHT LOSS**

MASSIVE SPLENOMEGALY

**DRAGGING PAIN IN THE LEFT SIDE
OF ABDOMEN**

PERIPHERAL BLOOD SMEAR IS DONE



MATURE NEUTROPHILS

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CHRONIC MYELOID LEUKEMIA

**PERIPHERAL SMEAR WILL SHOW A LARGE
NUMBER OF MATURE NEUTROPHILS
SOME METAMYELOCYTES AND MYELOCYTES
INCREASED EOSINOPHILS, BASOPHILS AND
NUCLEATED RED CELLS WILL BE SEEN**

**THERE WILL A DRAMATIC INCREASE IN THE
NUMBER OF MATURE CIRCULATING
MYELOBLASTS**

**HISTOLOGICALLY THE PICTURE IS THAT OF
NORMOCYTIC NORMOCHROMIC ANAEMIA**

CHRONIC LYMPHOCYTIC LEUKEMIA

OCCURS IN THE 6TH DECADE

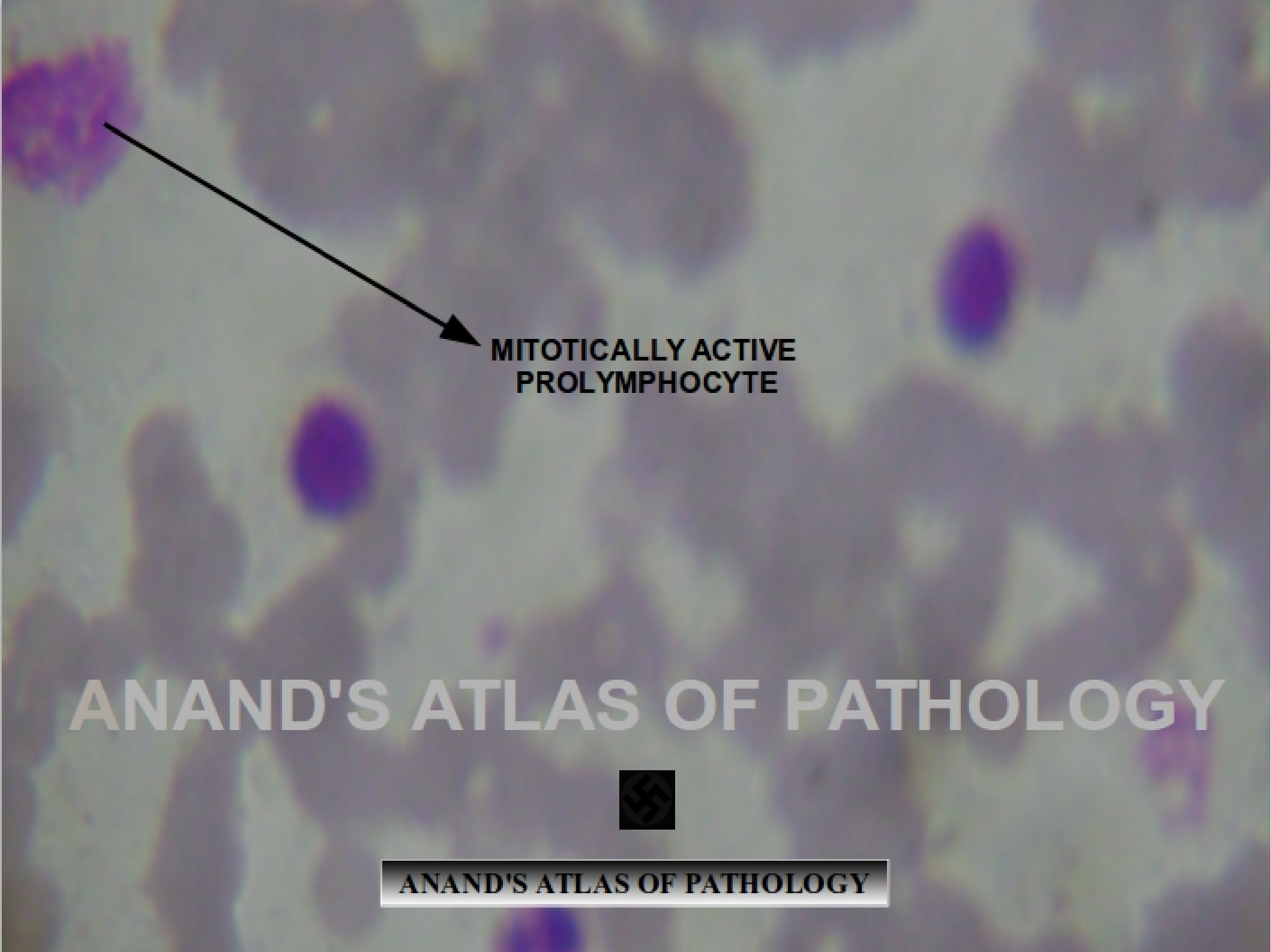
PATIENT PRESENTS WITH

FEVER, FATIGUE AND WEIGHT LOSS

GENERALISED LYMPHADENOPATHY IS PRESENT

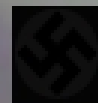
**DIFFERENTIAL COUNT SHOWS
ABNORMALLY HIGH LEUKOCYTOSIS**

PERIPHERAL BLOOD SMEAR IS DONE



**MITOTICALLY ACTIVE
PROLYMPHOCYTE**

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CHRONIC LYMPHOCYTIC LEUKEMIA

MILD TO GRADUALLY INCREASING ANAEMIA IS SEEN

THERE IS A MODERATE AMOUNT OF LEUKOCYTOSIS

**95% OF THE CELLS ARE LYMPHOCYTES
PREDOMINANTLY OF SMALL CELL TYPE**

**THE FOCI OF MITOTICALLY ACTIVE
PROLYMPHOCYTES ARE CALLED AS
PROLIFERATION CENTRES WHICH IS A THE
DIAGNOSTIC FEATURE OF CHRONIC
LYMPHOCYTIC LEUKEMIA**

MULTIPLE MYELOMA

OCCURS IN THE 6TH DECADE

PREPONDERANT IN MALES

PATIENTS PRESENT WITH LOW BACK ACHE

ABNORMALLY ELEVATED ESR COUNT IS SEEN

PROTEINURIA IS PRESENT

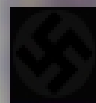
**XRAY OF SKULL REVEALS
PUNCHED OUT LESIONS**

PERIPHERAL SMEAR IS DONE

INCREASED COUNT OF
PLASMA CELLS



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ANAND'S ATLAS OF PATHOLOGY

MULTIPLE MYELOMA

MULTIPLE MYELOMA CAUSES DESTRUCTIVE BONE LESIONS

MICROSCOPICALLY THERE IS AN INCREASE OF PLASMA CELLS

THE NEOPLASTIC PLASMA CELLS RESEMBLE NORMAL MATURE PLASMA CELLS

THESE CELLS SHOW ABNORMAL FEATURES SUCH AS PROMINENT NUCLEOLI, ABNORMAL CYTOPLASMIC INCLUSIONS WHICH CONTAIN IMMUNOGLOBULIN

SECTION - 4

HISTOPATHOLOGY GROSS SPECIMENS

LIST OF GROSS SPECIMENS

ACUTE APPENDICITIS

**MUCINOUS CYSTADENOMA OF
OVARY**

DERMOID CYST

LEIOMYOMA

RENAL CELL CARCINOMA

OSTEOSARCOMA

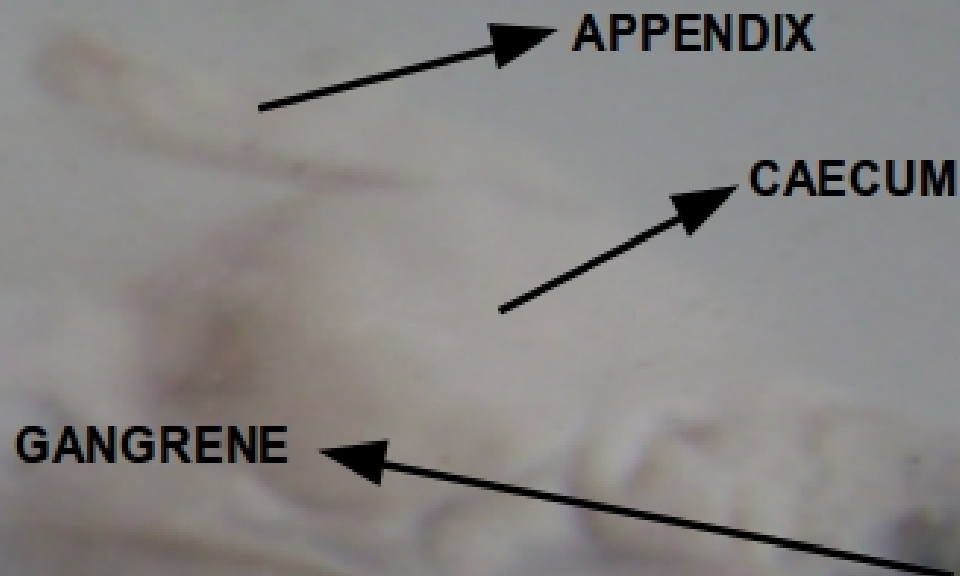
LIST OF GROSS SPECIMENS

OSTEOCLASTOMA
TUBERCULOSIS OF LUNG
INTESTINAL POLYPS
CIRRHOSIS OF LIVER
SECONDARIES OF LIVER
CARCINOMA OF BREAST

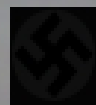
LIST OF GROSS SPECIMENS

MULTINODULAR GOITRE
SQUAMOUS CELL CARCINOMA
OF FOOT
CARCINOMA OF STOMACH
CHOLELITHIASIS
RENAL CALCULI
TRICHOBEZOAR

ACUTE APPENDICITIS



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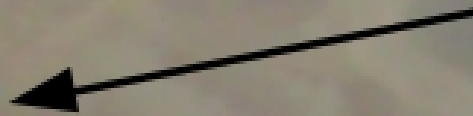
ACUTE APPENDICITIS

**THE ORGAN APPEARS TURGID
AND DUSKY RED DUE TO
INFLAMMATION AND
HAEMORRHAGES IN THE MUCOUS
MEMBRANE**

**IN ADVANCED CASES IT MIGHT
APPEAR DARKISH GREEN TO
BLACK BECAUSE OF
GANGRENOUS CHANGE**

MUCINOUS CYSTADENOMA OF OVARY

CYST CAVITY



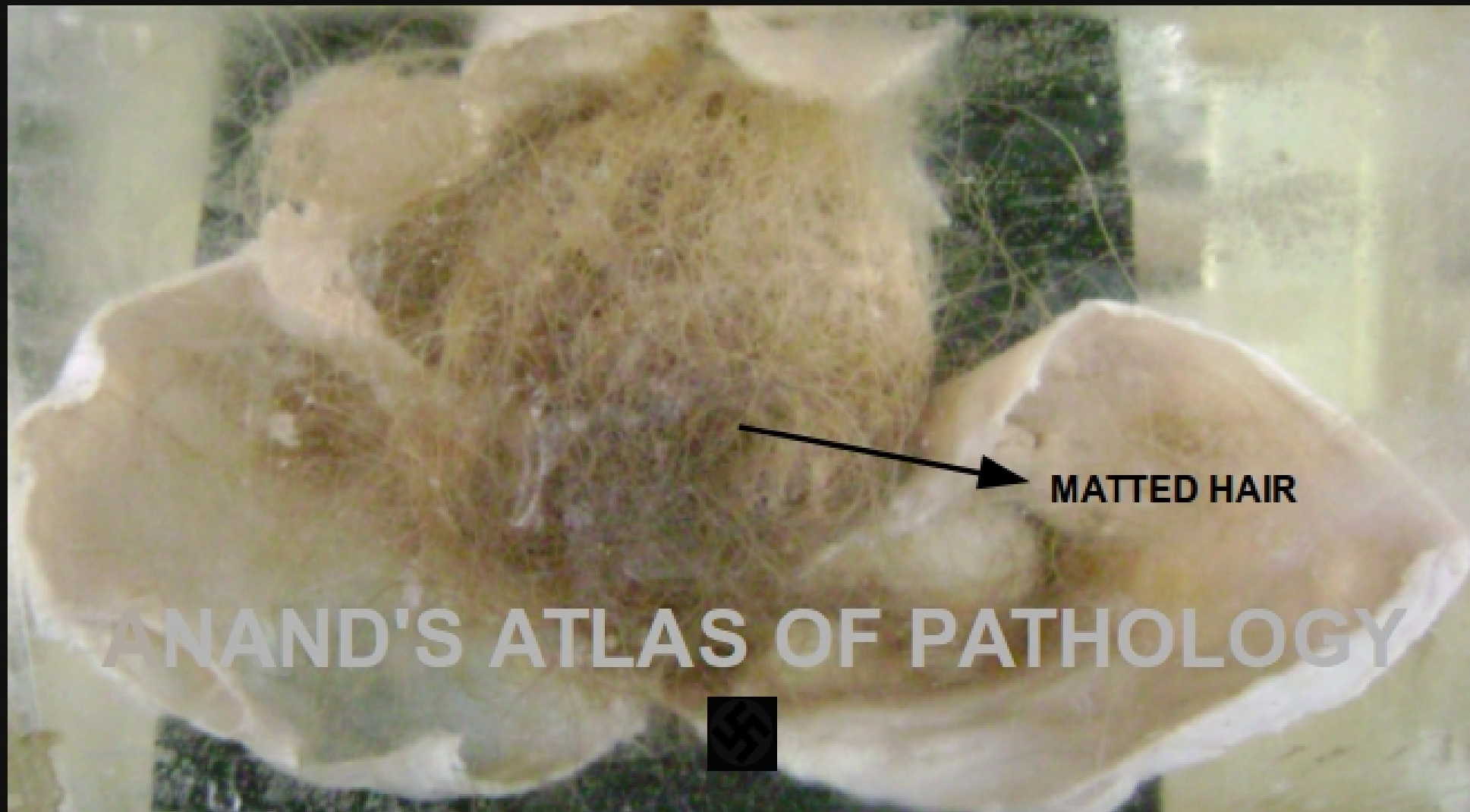
ANAND'S ATLAS OF PATHOLOGY



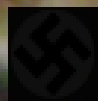
MUCINOUS CYSTADENOMA OF OVARY

USUALLY A BENIGN TUMOUR
RARELY UNDERGOES MALIGNANT
CHANGE
CYST CAVITIES ARE SEEN
DELICATE PAPILLARY TUMOUR
GROWTHS CAN BE SEEN IN THE
PERIPHERY

DERMOID CYST



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DERMOID CYST

AFFECTED ORGAN IS OVARY
THESE NEOPLASMS ARE CAUSED BY
ECTODERMAL DIFFERENTIATION OF
TOTIPOTENT GERM CELLS
MATTED HAIR BEARING EPITHELIAL
LINING IS SEEN
SOMETIMES IT CAN HAVE NODULAR
PROJECTIONS FROM WHICH TEETH
CAN PROTRUDE

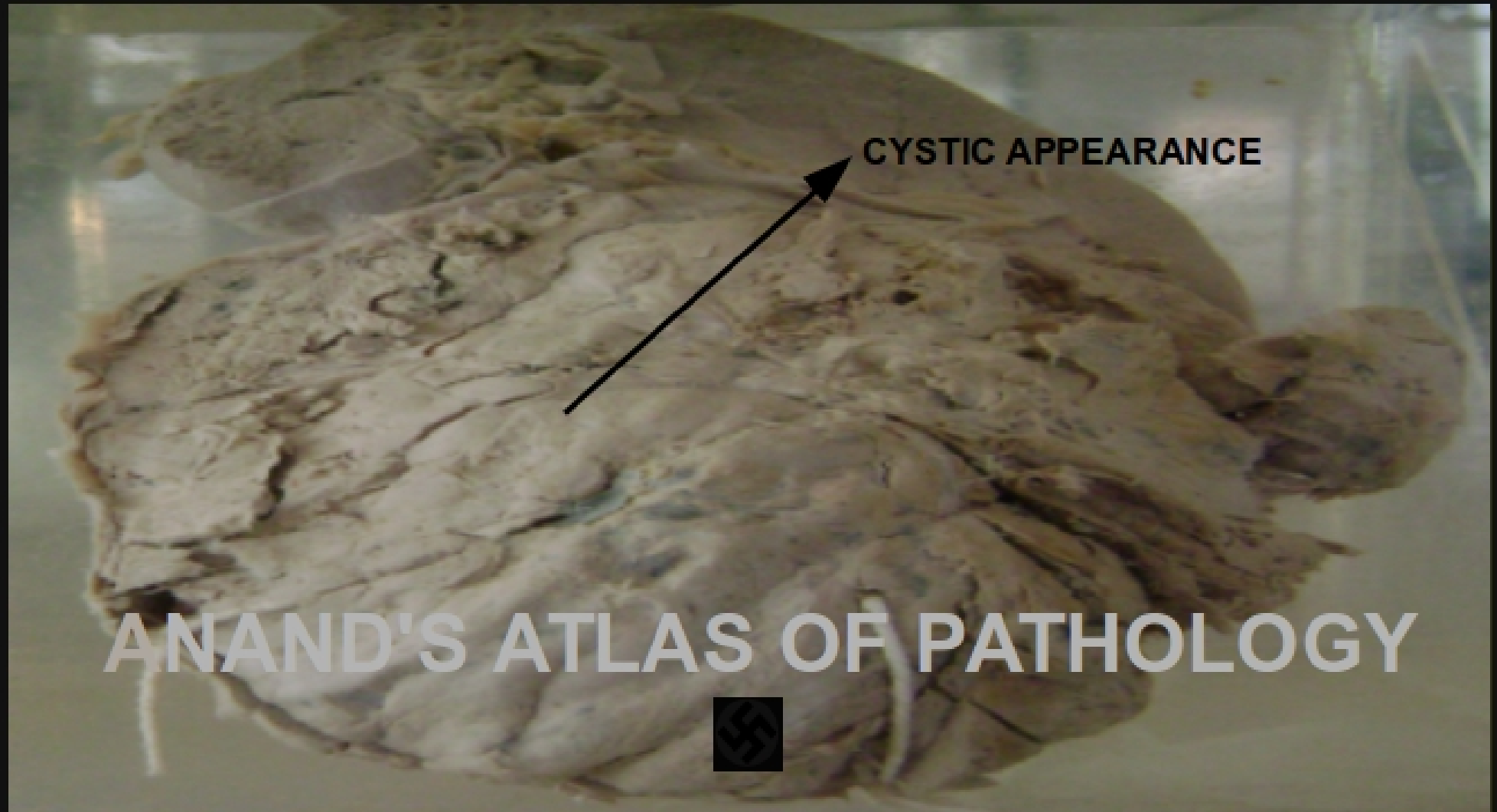
LEIOMYOMA OF UTERUS



LEIOMYOMA OF UTERUS

**TUMOUR IS A SHARPLY
CIRCUMSCRIBED FIRM
GRAY MASS
PRESENTS A
CHARACTERISTIC
WHORLED CUT SURFACE**

RENAL CELL CARCINOMA



RENAL CELL CARCINOMA

**KIDNEY IS USUALLY SOLITARY AND
LARGE**

**TUMOUR GROWTH IS USUALLY
CONFINED TO THE CORTEX**

**PROMINENT AREAS OF CYSTIC
SOFTENING OR HAEMORRHAGE ARE
SEEN**

**THE MARGINS OF THE TUMOUR ARE
WELL DEFINED**

OSTEOSARCOMA

DESTRUCTION OF CORTEX



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OSTEOSARCOMA

**IT IS A LARGE ILL DEFINED LESION
IN THE METAPHYSEAL REGION OF
THE AFFECTED BONE
TUMOUR HAS DESTROYED THE
CORTEX AND INVADED INTO THE
MARROW CAVITY AND OUTWARD
INTO ADJACENT SOFT TISSUES**

OSTEOCLASTOMA

CYSTIC CHANGES
WITH NECROSIS

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OSTEOCLASTOMA

**USUALLY ENDS OF LONG BONE ARE
AFFECTED
TUMOUR IS ALWAYS SOLITARY
TUMOUR ERODES INTO THE CORTEX AND
MAY EXTEND OUTSIDE THROUGH THE
OVERLYING PERIOSTEUM
PRESENTS A DARK BROWN APPEARANCE
DUE TO ABUNDANT VASCULARITY
AREAS OF NECROSIS AND CYSTIC CHANGES
ARE SEEN**

TUBERCULOSIS OF LUNG



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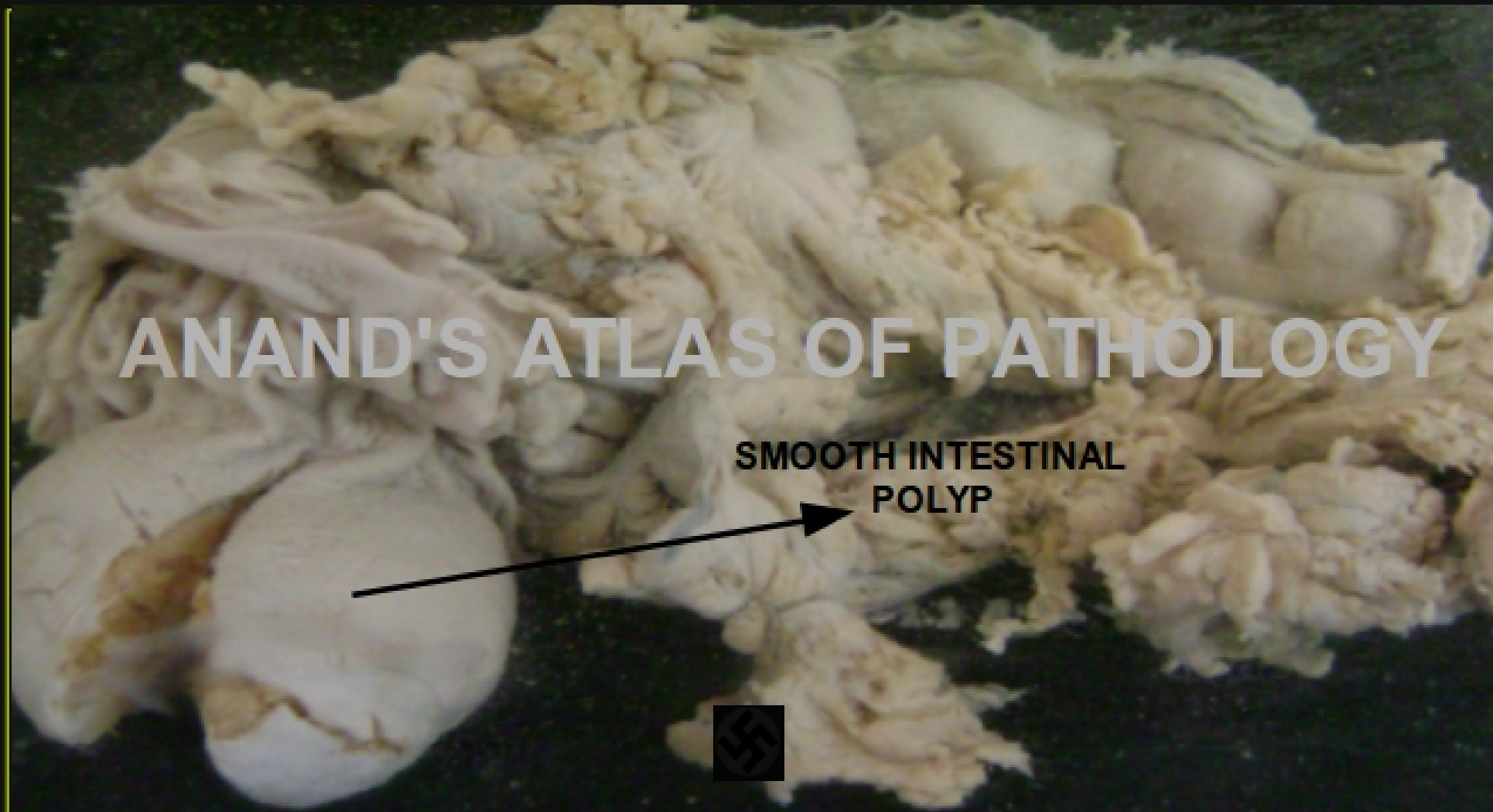
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TUBERCULOSIS OF LUNG

**LUNGS ARE RIDDLED WITH
GRAY WHITE AREAS OF
CASEATION**

**MULTIPLE AREAS OF
SOFTENING AND CAVITATION
ARE SEEN**

INTESTINAL POLYPS



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SMOOTH INTESTINAL
POLYP

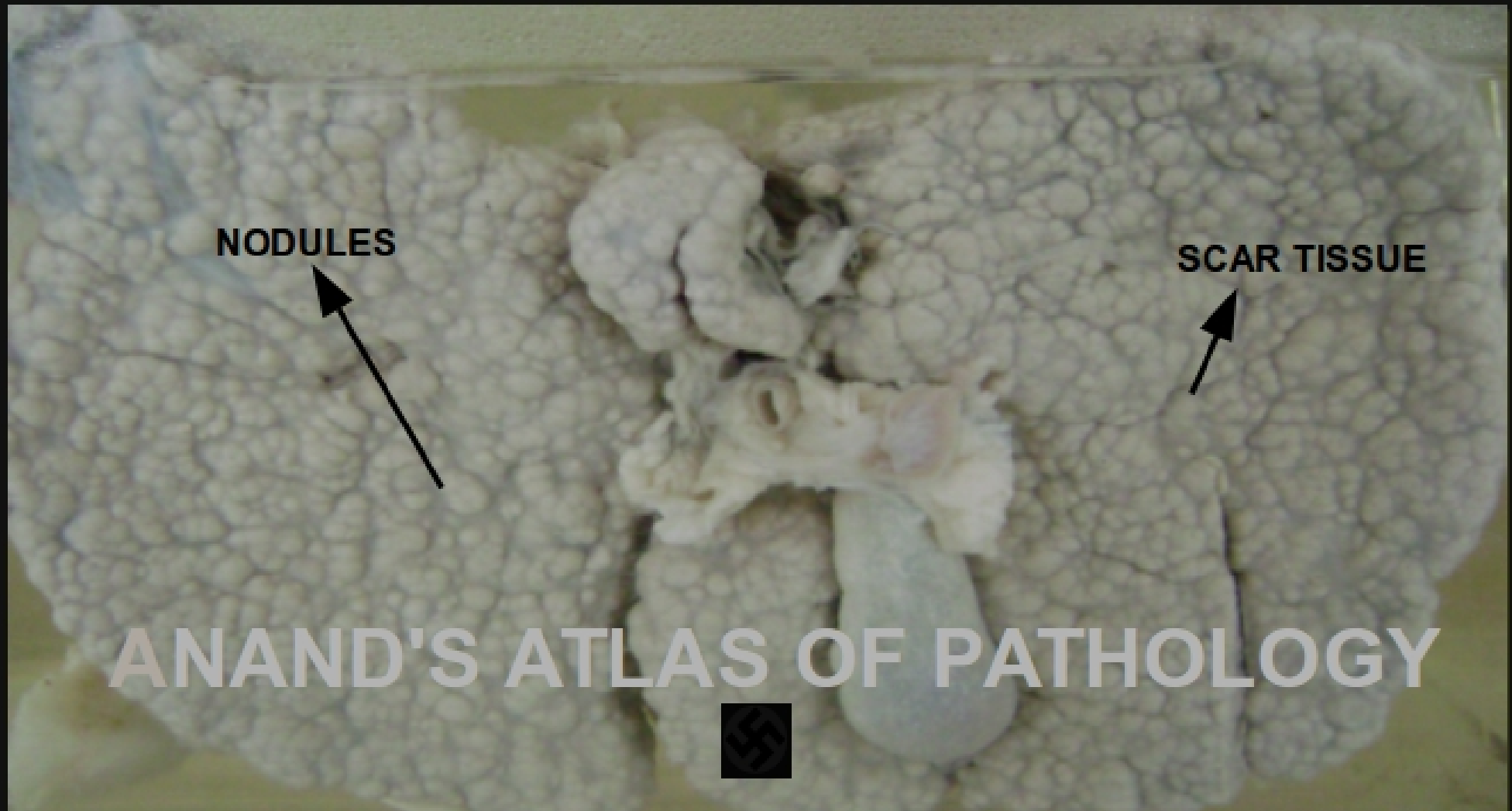


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INTESTINAL POLYPS

**MULTIPLE HEMISPHERICAL
SMOOTH PROTRUSIONS
ARE SEEN ON THE MUCOSA
THEY ARE NIPPLE LIKE
USUALLY AFFECTS THE
RECTOSIGMOID JUNCTION**

CIRRHOSIS OF LIVER



CIRRHOSIS OF LIVER

**SPECIMEN OF LIVER
SHOWING IRREGULARLY
SIZED NODULES
PUNCTUATING THE SURFACE
OF THE LIVER
THE NODULES ARE
SEPARATED BY SCAR TISSUE**

SECONDARIES - LIVER

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METASTATIC NODULE



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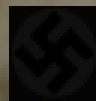
SECONDARIES - LIVER

WELL ROUNDED GROWTHS OF VARYING SIZES SEEN ON THE SURFACE OF THE LIVER
POSSIBLE PRIMARY SITES OF MALIGNANCY IS BY HAEMATogenous ROUTE FROM ABDOMINAL ORGANS AS ALL PORTAL BLOOD IS DRAINED INTO THE LIVER
COMMONEST SITES OF METASTATIC SECONDARIES INTO THE LIVER ARE FROM COLON, LUNGS AND BREAST

CARCINOMA OF BREAST

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NECROTIC TUMOUR
TISSUE

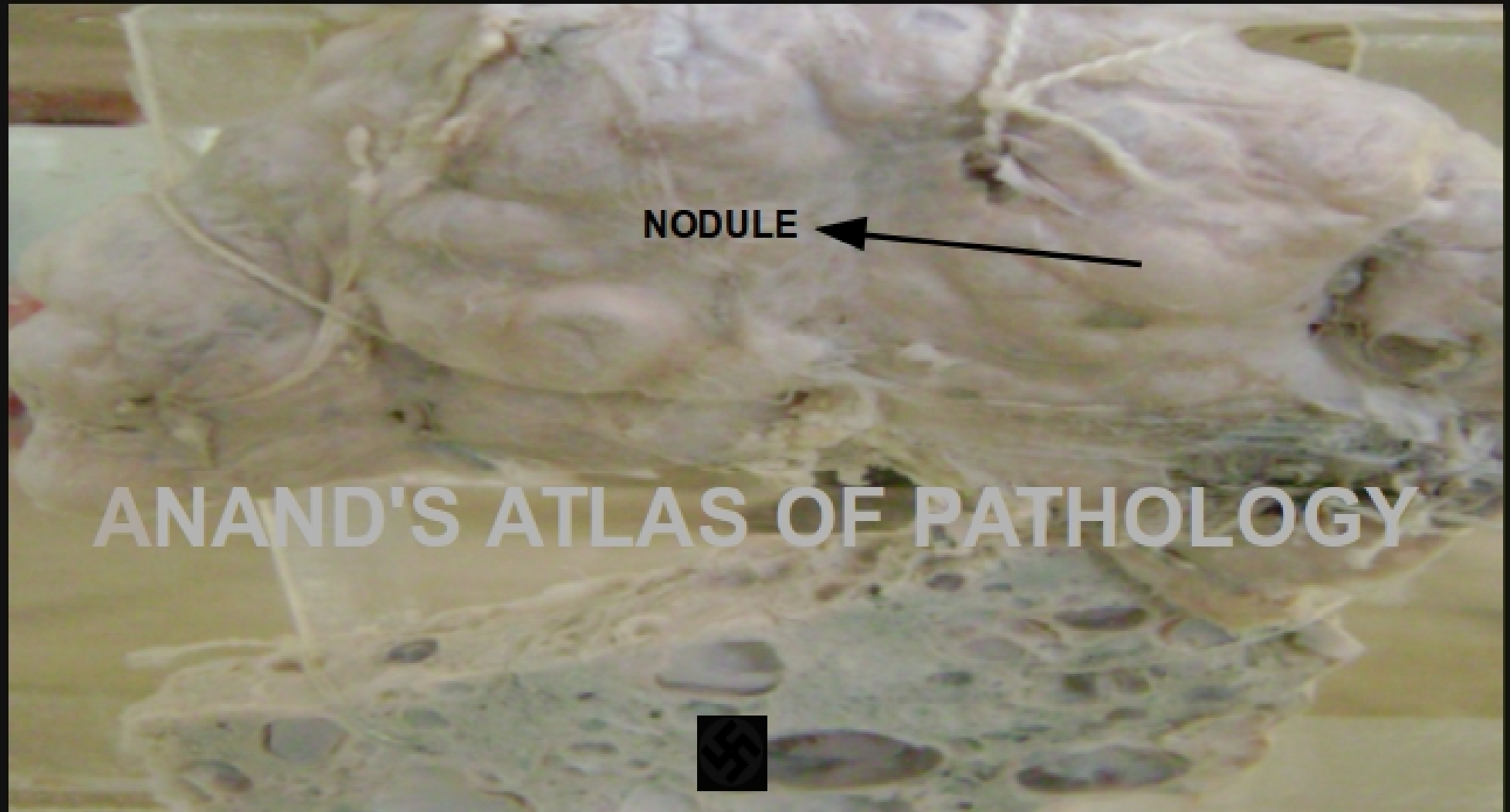


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CARCINOMA OF BREAST

**DUE TO DESMOPLASTIC RESPONSE,
NORMAL BREAST FAT IS REPLACED
AND FORMS A HARD PALPABLE MASS
DIMPLING OF SKIN IS SEEN
RETRACTION OF NIPPLE IS SEEN
FIXITY TO CHEST WALL IS SEEN IN
INVASIVE CARCINOMA**

MULTINODULAR GOITRE



MULTINODULAR GOITRE

THYROID GLAND IS IRREGULARLY ENLARGED

MULTIPLE IRREGULARLY PLACED NODULES OF VARYING SIZES AND SHAPE ARE SEEN

THE GLAND APPEARS COARSE AND AREAS OF FIBROSIS AND CYSTIC CHANGES ARE SEEN

SQUAMOUS CELL CARCINOMA OF FOOT

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CAULIFLOWER LIKE
GROWTH



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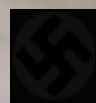
SQUAMOUS CELL CARCINOMA OF FOOT

**ARISES COMMONLY FROM SUNLIGHT
EXPOSED SURFACES
FOOT IS A COMMON SITE
OLD BURNS SCAR IS A PREDISPOSING
FACTOR
LESIONS ARE NODULAR, THE GROWTH
IS LIKE THAT OF A CAULIFLOWER**

CARCINOMA OF STOMACH

TUMOUR MASS

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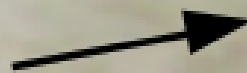
CARCINOMA OF STOMACH

**PYLORUS AND ANTRUM ARE THE
COMMONLY AFFECTED SITES**

**THERE IS PROTRUSION OF
TUMOUR MASS INTO THE LUMEN
IN EXCAVATED TYPE, A SHALLOW
OR DEEPLY EROSIVE CRATER IS
SEEN**

CHOLELITHIASIS

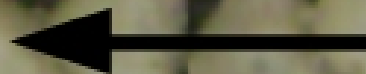
INFLAMMED MUCOSA
OF GALL BLADDER



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CALCULI



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CHOLELITHIASIS

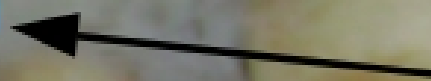
**THE GALL BLADDER MUCOSA IS IRREGULAR
DUE TO CHRONIC INFLAMMATION
MECHANICAL MANIPULATION OF GALL
BLADDER CAUSES FRAGMENTATION OF GALL
STONES**

**CALCULI ARE USUALLY CHOLESTEROL
STONES**

**CHOLESTEROL STONES ARE USUALLY
YELLOW, MULTIPLE AND HAVE FACETED
SURFACES**

RENAL CALCULI

RENAL CALCULI



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RENAL CALCULI

ALSO CALLED AS UROLITHIASIS

RENAL CALCULI ARE USUALLY UNILATERAL

COMMONEST SITES OF CALCULI ARE

RENAL PELVIS AND CALYCES

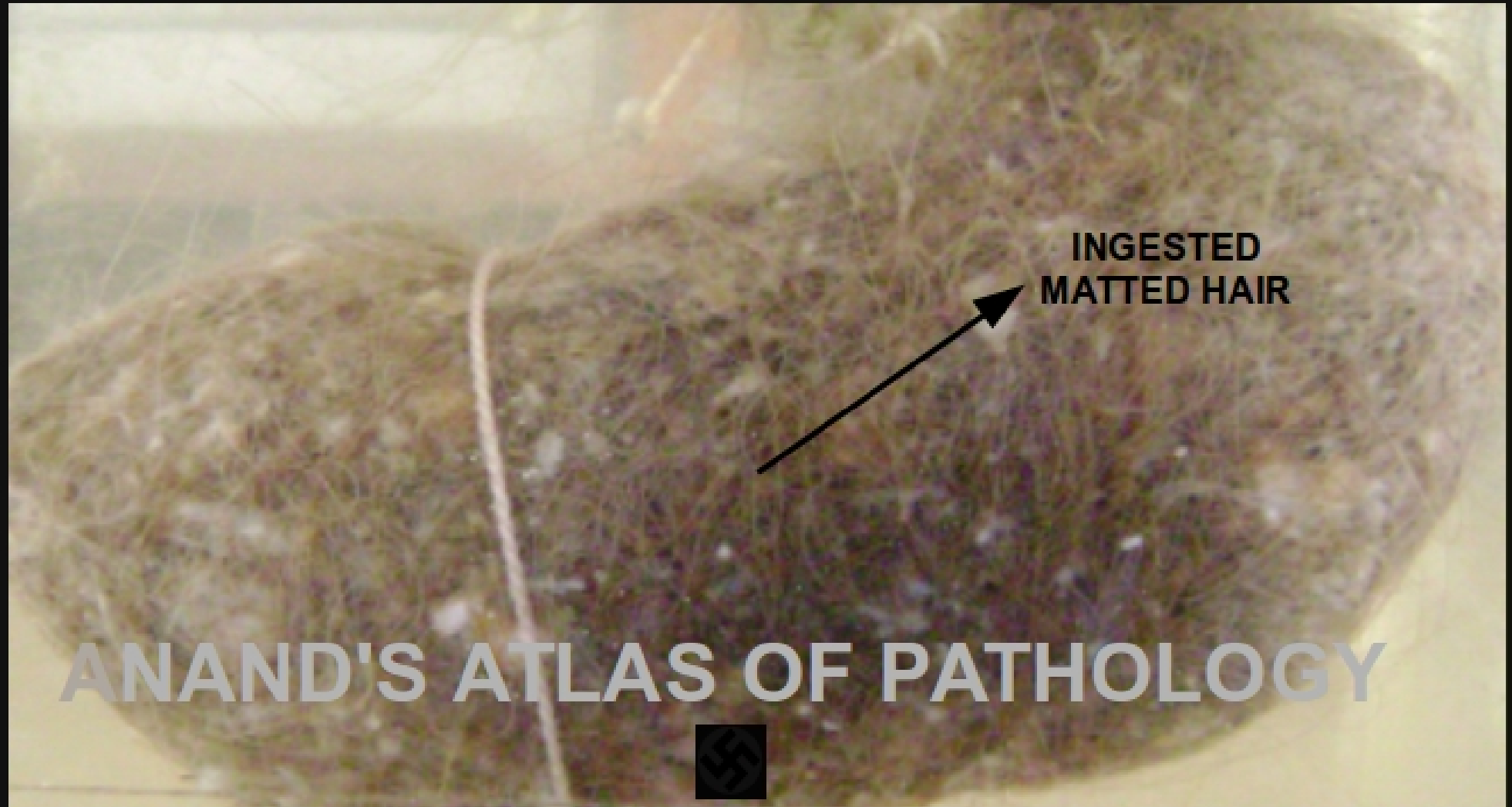
MANY STONES ARE FOUND

STAGHORN CALCULI IS DUE TO

PROGRESSIVE ACCUMULATION OF SALTS

**MASSIVE STONES ARE USUALLY COMPOSED
OF MAGNESIUM AMMONIUM PHOSPHATE**

TRICHOBEZOAR



TRICHOBEZOAR

**TRICHOBEZOAR OCCURS ALMOST
EXCLUSIVELY IN FEMALES**

**80% OF THE PATIENTS SUFFER
FROM PSYCHIATRIC DISORDERS**

**TRICHOBEZOAR RESULTS FROM
INGESTION OF HAIR**

**PATHOLOGICALLY IT GIVES RISE TO
GASTRODUODENAL ULCERATION**



THANK YOU

Anand's Atlas of Pathology

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2015